

**SLIPPING AWAY:
INTERNATIONAL
ANGUILLA EEL TRADE
AND THE ROLE OF
THE PHILIPPINES**

BY

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Giant mottled freshwater eel (*A. marmorata*)

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Slipping away: International *Anguilla* eel trade and the role of the Philippines

Vicki Crook



Diora River, Santa Ana, Cagayan province – a river with glass eel fisheries. © Matthew Gollock

Contents

Executive Summary	1
Introduction	3
Methods	6
<i>Food and Agricultural Organization (FAO) of the United Nations (UN)</i>	6
<i>Bureau of Agricultural Statistics (BAS)</i>	6
<i>UN Comtrade</i>	6
<i>East Asian Customs data</i>	7
<i>CITES and Eurostat data</i>	7
<i>Business to Business Trade Platforms</i>	7
<i>Other sources</i>	8
Eel production – catch and aquaculture	9
Eel trade	12
Live eel trade - general	12
Live eel trade – glass eel/live eel fry.....	14
<i>Trade data</i>	14
<i>Advertisements/companies</i>	18
<i>Enforcement action - seizures/operations</i>	21
Live eel trade – other live eel	22
Farming and the market for Philippine eels in East Asia	24
Conclusions	26
Recommendations	28
Data collection, monitoring and availability.....	28
Legislation and enforcement.....	28
Additional collaboration and consultation with stakeholders	29
References	30
Annex	32

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Executive Summary

There are 16 species of freshwater eels in the genus *Anguilla*, distributed throughout temperate and tropical waters. Various life stages of all *Anguilla* species, ranging from juveniles to adults, are harvested and traded on a global scale, with current demand being mainly in East Asia for consumption. Eel farming, which is responsible for over 90% of all *Anguilla* production worldwide, is reliant on growing out wild-caught juvenile eels (“glass eels” or “eel fry”). Historically, farming and trade focused on the temperate species, but with population declines and new catch/trade measures limiting exploitation and export levels for species such as *Anguilla anguilla* (European Eel) and *A. japonica* (Japanese Eel), industry has been looking to other sources, in particular tropical *Anguilla* species such as *A. bicolor*, to fulfil demand.

The Philippines has been identified as an increasingly important source of *Anguilla* spp. in recent years. Owing to the dramatic increase in exploitation and price of glass eels in the Philippines in 2011 and 2012, in May 2012 the Philippine Bureau of Fisheries and Aquatic Resources (BFAR) brought in a precautionary measure banning the export of juvenile eels ≤ 15 cm in length. Despite this, there have been concerns that large quantities of glass eels continue to be exported from the Philippines.

Noting the urgent need for developing complementary management at the local, regional, national and international levels for eel conservation, catch and trade in the Philippines, the Zoological Society of London (ZSL), TRAFFIC, BFAR and the Philippine Biodiversity Management Bureau (BMB) initiated a collaborative project in May 2014 - this report is one of the first project outputs. It provides an overview of Philippine eel catch and trade levels and its role and importance at the international level for supplying eels for farming and consumption purposes. This information is used to inform recommendations for future trade-related management and conservation of this ecologically and economically important group of species in the Philippines.

Various sources of *Anguilla* spp. production (catch and farming) and trade data/information were analysed, focusing mainly on the most recent ten year period for which data are available (2004-2013). Sources included Food and Agricultural Organization (FAO) global production data, Philippine Bureau of Agricultural Statistics (BAS) national/regional catch data, UN Comtrade export data, East Asian Customs import data, Business to Business Trade Platforms, seizures and additional literature and internet research.

Although there are discrepancies between datasets, in addition to a number of uncertainties related to the actual eel commodities in trade (species and life stages), research suggests that the Philippines became an increasingly important player in both the legal and illegal global eel markets from 2011 onwards, and in particular in 2012 and 2013. Between 2004 and 2013, the Philippines exported mostly live eels and the main destinations for these were the four principal eel farming/consuming countries/territories in East Asia: mainland China, Japan, Korea and Taiwan, in addition to Hong Kong, which is a major trade hub for live eels. In 2012 and 2013, the Philippines was the source of approximately 30% of all East Asian live eel fry imports.

Information obtained from Customs data, seizures and online advertisements indicates that shipment of eels below the size authorized to be exported from the Philippines has continued, illegally, despite the ban in place since May 2012. The Philippines was also identified as a potential transit country for illegal trade in non-native species such as the European Eel. Furthermore, large discrepancies between catch and trade datasets from local, national and international sources raise concerns over potential illegal and unreported fishing of eels in the Philippines.

Historically, Cagayan Valley has been the primary area of *Anguilla* fishing within the Philippines, however research suggests that glass eel exploitation is expanding to other areas, in particular Mindanao. In addition to catching glass eels for export, there appears to be a move to initiate farming, or at least the “growing out” of eels to sizes permitted for export (>15 cm). The trade data also suggest that, in addition to the Philippines, many other countries have become increasingly important sources of live eel fry in recent years, including

Canada, United States of America and the Dominican Republic in the Americas, Madagascar in Africa, and Viet Nam, Malaysia, Thailand and Indonesia in South-East Asia.

The information presented in this report clearly shows the ever-changing dynamics of eel trade and that if *Anguilla japonica* recruitment in East Asian waters is low, other sources of *Anguilla* will be found (legally or illegally); and their availability/recruitment will in turn affect exploitation of other sources. Increased controls and management in certain source countries, such as European Union Member States, the Philippines, Indonesia and the Dominican Republic (all of which currently have export bans in place) and changes in consumption behaviour/demand are also affecting trade dynamics. All these factors, together with other threats potentially affecting eels in the Philippines, such as pollution and habitat destruction, need to be considered when deciding on appropriate eel conservation and management measures in the Philippines.

The recommendations for eel conservation and management provided in this report focus mainly on pressures from over-harvesting and action that can be taken by Philippine authorities, including the national and regional offices of BFAR, BAS, BMB, Bureau of Customs and Local Government Units (LGUs). The vital role of wide national and third-country stakeholder and partner participation is emphasised, however. Recommendations cover the following main issues:

- 1) **Data collection, monitoring and availability** – assign clear responsibilities for carrying out regular reporting, monitoring and analysis of global, national and local datasets; investigate and address reasons for large data discrepancies identified in the report; collect more species and life stage specific catch and trade data; collate details of farming facilities; and in relation to all of these, build capacity through training and making resources more widely available.
- 2) **Legislation and enforcement** – analyse implications of current/potential eel conservation and management measures and based on this, develop complementary national, regional and local legislative instruments; ensure any management measures are implemented and enforced at the appropriate level, through clear assignation of roles and training; while export bans remain in force, enhance national enforcement effort and capacity through sharing of information, training and establishing a risk assessment model for Philippine eel trade; co-operate and share intelligence and information with consumer/transit countries/territories; and exchange experiences and collaborate with other *Anguilla* spp. range States.
- 3) **Additional collaboration and consultation with stakeholders** – contact fisheries authorities, trade and farming associations and researchers in East Asia to raise awareness of concerns and the importance of traceability and legality of sourcing of eels from the Philippines; request support from East Asian experts with regard to species identification and eel farming techniques; and collaborate with global B2B trade platform companies, including contacting them regularly to request the removal of advertisements offering potentially illegally sourced eels.

Introduction

There are 16 species of *Anguilla*¹ in the Anguillidae family distributed throughout tropical and temperate waters, except for the eastern Pacific and south Atlantic. *Anguilla* species (also called freshwater eels) exhibit facultative catadromy, living in fresh, brackish and coastal waters but migrating to pelagic marine waters to breed. Various life stages (Figure 1), ranging from glass to silver eel, of all *Anguilla* species are harvested and traded on a global scale for consumption - directly or after culture - and for stocking purposes, with current demand predominantly driven by East Asian markets, in particular Japan and mainland China. Historically, use and trade focused on the temperate species – *A. anguilla* European Eel, *A. rostrata* American Eel, *A. japonica* Japanese Eel and *A. australis* Short-finned Eel. However, with population declines and new catch/trade measures coming into force limiting exploitation and export levels for certain species / populations, industry has been looking to other sources, in particular tropical *Anguilla* species, such as *A. bicolor*, to fulfil demand.

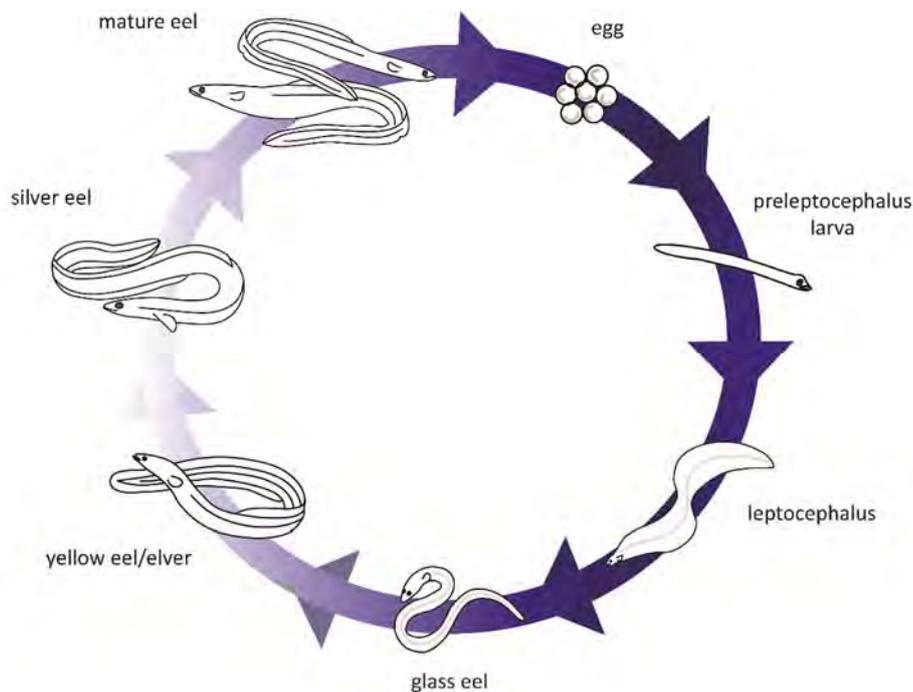


Figure 1 The life cycle of Anguillid eels. Adapted from Jacoby *et al.* in prep, and Henkel *et al.* (2012).

Eel farming, which is responsible for over 90% of all *Anguilla* production worldwide, is reliant on wild-caught juvenile eels or “glass eels”², as reproducing and raising *Anguilla* eel larvae to the glass eel stage in captivity is not yet commercially viable. Historically, Asian eel farms in mainland China, Japan, the Republic of Korea (hereafter referred to as Korea) and Taiwan used *A. japonica* glass eels for this purpose, however declines in *A. japonica* recruitment, combined with the apparently cheap and abundant supplies of other species has caused a change in sourcing over the last decades (*A. japonica*, nevertheless, still remains the preferred species for consumption in Japan).

Towards the end of the 1990s, *A. anguilla* was imported into Asia in large quantities for this purpose. However, concerns over the impact international trade was having on this species led to it being listed in Appendix II of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This listing came into force on 13 March 2009. Since then any international trade in *A. anguilla* needs to be

¹*A. anguilla*, *A. australis*, *A. bengalensis*, *A. bicolor*, *A. borneensis*, *A. celebesensis*, *A. dieffenbachii*, *A. interioris*, *A. japonica*, *A. luzonensis*, *A. marmorata*, *A. megastoma*, *A. mossambica*, *A. obscura*, *A. reinhardtii* and *A. rostrata* (Teng *et al.*, 2009). Three species (*A. bengalensis*, *A. bicolor*, *A. australis*) have been proposed to have sub-species by some researchers (Froese and Pauly, 2014; M. Gollock, *in litt.*, July 2014).

² Also described as “fry”, “fingerlings” and “elvers” – these terms are used interchangeably depending on the country, however can also be used to describe different sizes of juveniles. In the Philippines, according to the Fisheries Administrative Order No. 242 “eel fry” are defined as the post larval form of eels not exceeding 5 cm in length, with a glass-like transparency, also called glass eels. “Eel fingerlings” are defined as the juvenile form of all eels more than 5 cm but not exceeding 15 cm in length. See Table 1 for the different use of these terms in East Asian Customs codes.

accompanied by a permit. In December 2010, the European Union (EU) decided to take a stricter measure by banning all imports and exports of *A. anguilla* to and from the EU, as authorities felt they were unable to determine that trade would not be detrimental to the conservation of the species³.

As a consequence, the Americas and South-East Asia have become increasingly important sources of juvenile eels for farming and larger live eels for direct consumption. In Asia, the Philippines in particular was identified as an important source, being the home to at least five different *Anguilla* species: *A. bicolor*, *A. marmorata*, *A. japonica*, *A. celebesensis* and *A. luzonensis*, the latter only described in 2009 (Watanabe *et al.*, 2009; Yoshinaga *et al.*, 2014). Due to its similar texture and taste, if *A. japonica* is not available to the consumer, *A. bicolor* is the preferred second option and therefore in particular demand (Anon, 2013; Anon, 2014a). All five species have recently been assessed against the IUCN Red List criteria, and due to concerns that a variety of threats, including over-exploitation, are causing declines in their populations, *A. japonica* was rated as Endangered and *A. bicolor*, *A. celebesensis* and *A. luzonensis* as Near Threatened (*A. marmorata* was rated as Least Concern) (Jacoby and Gollock, 2014).

In May 2012, the Philippine Bureau of Fisheries and Aquatic Resources (BFAR) brought in Fisheries Administrative Order No. 242⁴ (BFAR, 2012a) as a precautionary measure due to the dramatic increase in exploitation and price of glass eels in the Philippines in 2011 and 2012, in particular in Cagayan province in northern Luzon (Figure 2), and concerns over the long-term sustainability of fishing of glass eels for export (Ame *et al.*, 2013). Fisheries Administrative Order No. 242 imposes an export ban for juvenile eels (“eel fry/glass eels” and “eel fingerlings”) not exceeding 15 cm (i.e. ≤ 15 cm); non-compliance with this order carries a penalty of eight years imprisonment, confiscation of catch or a fine equivalent to double the export value of the same, and revocation of fishing and / or export permits. Although export of glass eels from the Philippines is currently not permitted, fishing is still allowed.

BFAR has also been running local eel conservation initiatives in the Cagayan Valley Region (BFAR Region 02⁵) in recent years, including a re-stocking project since 2008; however high prices of glass eels due to demand from East Asia prevented re-stocking the planned quantity of eels in the Cagayan Valley in 2012 (BFAR, 2012b). Other activities have included meeting with local stakeholders to discuss options for the regulation of harvest with the intention of drafting a municipal fisheries ordinance specifically for eel management and conservation, and carrying out a preliminary survey of glass eel fishermen and their fisheries to provide baseline data for future assessments (BFAR, 2012b; BFAR 2013a).

Despite these attempts, according to East Asian Customs data and farming reports, online advertisements and seizures reported by BFAR, large quantities of juvenile eels ≤ 15 cm in length continue to be exported from the Philippines, illegally. Noting the urgent need for developing complementary management at the local, regional, national and international levels for eel conservation, catch and trade, the Zoological Society of London (ZSL) and TRAFFIC, in collaboration with BFAR and the Philippine Biodiversity Management Bureau (BMB⁶), carried out a project scoping trip in May 2013 (BFAR, 2013a). Based on information collected and priorities identified during this trip, these partners developed an eel conservation project, which commenced in May 2014, with funding from the Darwin Initiative and the UK Department for Environment, Food and Rural Affairs (Defra).

This report is one of the first outputs under this project and aims to provide an overview of Philippine eel catch and trade levels and its role and importance at the international level for supplying eels for farming and consumption purposes. Information from catch and trade data, combined with online business to business advertisements, seizures and additional literature and internet research is summarized and forms the basis of recommendations for future trade-related management and conservation of this ecologically and economically important group of species in the Philippines.

³ A “non-detriment finding” (NDF) and a legal finding are requirements for issuing permits for CITES Appendix I- and II-listed species.

⁴ <http://www.bfar.da.gov.ph/LAW?fi=405#post>

⁵ BFAR Region 02 is one of the 16 regional BFAR offices, also known as the Cagayan Valley Region.

⁶ BMB, an agency within the Department of Environment and Natural Resources (DENR), was previously called the Protected Areas and Wildlife Bureau (PAWB), and was re-named in January 2014: <http://www.mb.com.ph/pawb-renamed-to-biodiversity-management-bureau/>



Figure 2 Map of the Philippines showing the main island groups and highlighting Cagayan province, historically the primary area of *Anguilla* fishing within the Philippines.

Methods

The various sources of *Anguilla* spp. production (catch and farming) and trade data/information analysed for this report are summarised below. Double-counting, under-reporting and misreporting must be taken into consideration when interpreting all available catch and trade data (Crook, 2010).

A number of the sources used provide data in both weight and value. Weight (in kg or tonnes) was used as the principal measure for analysis, and value or price was only referred to where it was considered useful background information and/or to provide an indication of the type of commodity in trade (e.g. in advertisements). Globally, trade in live eels is grouped together under one Harmonised System⁷ Customs code: HS 030192. As smaller glass eels are of much higher value than larger juveniles (per individual), and these in turn have a higher value than adult eels, value can be a useful indicator of the life stage of eels in trade. However, under-reporting of value in Customs data has been identified across various datasets, and for this report East Asian data, which differentiates life stages and species of live *Anguilla* spp. to varying degrees (see Table 1), were used to overcome this problem partly. It is important to note, however, that the data presented in Figures 3-5 and 7-9 do not differentiate between life stages.

In addition to analyses of all collated data and information being presented in this report, all data were added to TRAFFIC's database, which facilitates analysis of links between seizures, intelligence and trade/survey data. TRAFFIC will continue to input information collected on possible illegal eel trade related to the Philippines, and details of any specific relationship/persons/organizations that may be relevant for enforcement effort will be shared with the Philippine authorities in the future.

Food and Agricultural Organization (FAO) of the United Nations (UN)

Global *Anguilla* spp. capture and aquaculture data for 1976-2012 were downloaded in July 2014 from "Global Production 1950-2012" dataset <http://www.fao.org/fishery/statistics/software/fishstatj/en>. Estimated quantities (F) were included in the analysis. *Anguilla* spp. trade data, downloaded in July 2014 from "Fisheries Commodities Production and Trade 1976-2011" were also analysed briefly for comparison with UN Comtrade data. FAO data do not differentiate life stages.

Bureau of Agricultural Statistics (BAS)

"Igat" (freshwater eel in Tagalog) production (catch) in the Philippines for 2002-2013 (all years available) was downloaded in July 2014 from "Inland Municipal Fisheries: Volume of Production by Species, by Region and by Province" <http://countrystat.bas.gov.ph/?cont=10&pageid=1&ma=D40PNVIP>. 2012 and 2013 data were corrected to take into account Rice Eel (or Swamp Eel) *Monopterus albus* production due to this species (together with *Anguilla*) currently being reported under "Igat". Prior to and including 2011, *Anguilla* spp. composed 100% Igat production, in 2012 *Anguilla* made up 95% and *M. albus* 5% and in 2013 *Anguilla* only 30% and *M. albus* 70% (E. Ame, BFAR, *in litt.*, June 2014). BAS catch data were compared to export data from UN Comtrade. BAS data do not differentiate life stages.

UN Comtrade

Global *Anguilla* spp. exports for 2002-2013, with a focus on live eels (HS Code 030192), were downloaded in July 2014 from the UN Comtrade Database: <http://comtrade.un.org/>. UN Comtrade export data were more detailed (providing data of individual trading partners) and up to date than FAO data and were therefore selected for further analysis (totals from these two sources being comparable). UN Comtrade was used as the source for Philippine export data (as Philippine trade data for relevant individual commodities were not publically available from national sources), which were compared with imports reported by East Asian Customs. UN Comtrade data do not differentiate life stages.

⁷ The Harmonized Commodity Description and Coding System (HS) is an internationally standardized system of names and numbers for classifying traded products developed and maintained by the World Customs Organization (WCO). To ensure harmonization, contracting parties to the HS Convention must employ all 4- and 6-digit (HS6) provisions, but are free to adopt additional subcategories and notes. The Harmonized System is revised every five to six years and was most recently updated in 2012: <http://www.wcoomd.org/en/topics/nomenclature/instrument-and-tools.aspx>

Taiwan data are reported under “Other Asia nes” in UN Comtrade. In principle, trade data for other territories belonging to Asia, but not specified by country, could be included in this, however, in practice, only Taiwan trade is included under this code⁸. For this report all eel trade data reported under “Other Asia nes” was assumed to be for Taiwan.

East Asian Customs data

Customs import data for live *Anguilla* spp. for the main eel importing countries/territories were requested or downloaded in June and July 2014 from the following sources: China Customs Information Centre (data requested via China Cuslink Co., Ltd.); Hong Kong Trade Development Council http://bso.hktdc.com/bso/jsp/bso_home.jsp; Ministry of Finance, Trade Statistics of Japan http://www.customs.go.jp/toukei/info/index_e.htm; Korea International Trade Association <http://global.kita.net/>; Taiwan Bureau of Foreign Trade <http://cus93.trade.gov.tw/ENGLISH/FSCE/>.

As a minimum, East Asian data differentiate between “live eel fry” for aquaculture purposes and “other live eel” for consumption purposes; however, some countries/territories divide live eel fry into additional size categories. Table 1 shows all live eel Customs codes used in mainland China, Hong Kong Special Administrative Region of the People’s Republic of China (hereafter referred to as Hong Kong), Japan, Korea and Taiwan over the last decade. East Asia is used throughout this report to describe these five countries/territories, unless otherwise specified.

Where “Source” is described/presented in the report, this is the reported exporting country in East Asia importer data. 2004-2013 annual import data from all sources and 2011-2014 monthly data for imports from the Philippines were analysed (at the time of writing available to April 2014 in all East Asian countries/territories). It is important to note, however, that monthly data are often not confirmed at publication and still open to adjustment due to various reasons (e.g. misclassification of commodities or country/territory of consignment, wrong reporting of value or quantity, and lodging of more than one declaration for the same consignment). In Hong Kong, adjustments relating to earlier months of a particular year are incorporated in the cumulative totals of that year only (annual data), i.e. monthly data are not amended (Hong Kong Census and Statistics Department, *in litt.*, July 2014).

As Hong Kong is a major trade hub, in particular for glass eels, Figures 10, 11 and 13 showing imports of live eel fry exclude Hong Kong as a “source”, i.e. imports into mainland China, Japan, Korea and Taiwan from Hong Kong are excluded. This is to minimize double-counting, as Hong Kong is not an actual source of glass eels nor does it farm eels; it imports from various sources and then re-exports these within East Asia. Hong Kong reports two different types of imports – by origin, and by exporter – origin data were used for this report. It is important to note also that Japan supposedly reports imports as per origin of the commodity⁹, however Hong Kong is reported by Japan as the source for significant quantities of live eel fry, and therefore it is unclear if this process is followed at all times.

CITES and Eurostat data

CITES data for *Anguilla anguilla* trade 2009-2012 and European Union Customs data for live *Anguilla* spp. trade 2004-2013 were also downloaded in July 2014 from <http://trade.cites.org/> and http://epp.eurostat.ec.europa.eu/portal/page/portal/international_trade/data/database. There was very little trade relevant to the Philippines reported in these data sources, and therefore they were not used, apart from for a brief comparison with Philippines import data in 2011 (Figure 9).

Business to Business Trade Platforms

English language versions of Global Business to Business (B2B) trade platforms Alibaba <http://www.alibaba.com/>, EC21 <http://www.ec21.com/>, Food & Beverage (F&B) Online <http://www.21food.com/>, TradeKey <http://www.tradekey.com/> and Weiku <http://www.weiku.com/> were searched for advertisements of “glass eel”, “eel fry” and “baby eel”, in addition to quick checks of more

⁸ <http://unstats.un.org/unsd/tradekb/Knowledgebase/Taiwan-Province-of-China-Trade-data?Keywords=taiwan>

⁹ http://www.customs.go.jp/toukei/sankou/howto/gaiyou_e.htm

general search terms such as “eel” and “Anguilla” in May and July 2014. Results from searches were filtered according to product types (to exclude non-fishery products) and location of suppliers, with a focus on the Philippines and companies offering eels sourced in the Philippines (but based elsewhere).

Each trade platform provides different types of useful information, such as time of last login (only those who have logged in within the last 6 months on Alibaba were recorded), company address, contact details and enquiry records. Therefore in several cases advertisements from more than one site were used to collate all the relevant information presented in Tables 5 and 6 in the Annex. Information provided in the advertisements was edited to correct for clear orthographic errors, however all the detail provided was noted, even where its accuracy/validity was unclear/unknown, e.g. *A. japonica* being offered for sale and being cultivated in the Philippines, new species names, supply capability and months. Names of companies provided in the report are as stated in the relevant web pages/advertisements when accessed in July 2014.

Overall numbers of advertisements/suppliers for glass eels/eel fry on each of these sites were briefly compared between each other and with previous research carried out in June and November 2012. However, as several companies advertise on various sites and often have more than one advertisement each, it is important to note that the total numbers presented in the discussion and graphs are for illustrative purposes only. Weiku results are included in Tables 5 and 6 in the Annex, but excluded from the totals summarized in the text, due to this site providing less user-friendly search and filtering options.

Other sources

Scientific publications, government reports, press releases, classified advertisements, company websites, social media sites and blogs in English, Japanese and Chinese languages were searched for information on recent eel fishing and trade issues involving the Philippines, Japan, Taiwan and mainland China. Some specific stakeholders were also contacted for further details on seizures and eel trade patterns, including representatives of BFAR, the Japan Eel Importers Association, and Spanish CITES Management and Enforcement authorities.

Table 1 East Asian Customs codes and descriptions for trade in Live *Anguilla* spp. *Source:* China Customs Information Centre; Hong Kong Census and Statistics Department; Ministry of Finance, Trade Statistics of Japan; Korea International Trade Association; Taiwan Bureau of Foreign Trade.

	Customs Code	Commodity
China/	0301.92.10	Live eel fry " <i>Anguilla</i> spp."
Hong Kong	0301.92.90	Live eels, other than fry (<i>Anguilla</i> spp.)
Japan	0301.92.10.0	Live eel fry " <i>Anguilla</i> spp."
	0301.92.20.0	Live eels, other than fry (<i>Anguilla</i> spp.)
Korea	0301.92.10.00	Live eel fry " <i>Anguilla</i> spp." <i>Definition applicable until end 2012</i>
	0301.92.10.00	Glass eel ($\leq 0.3g$ per unit, for aquaculture) <i>Used from 2013 onwards</i>
	0301.92.22.00	Young eel ($> 0.3g$ and $\leq 50 g$ per unit, for aquaculture) <i>Used from 2013 onwards</i>
	0301.92.90.00	Live eels, other than fry (<i>Anguilla</i> spp.)
Taiwan	0301.92.10.10-1	Eels, <i>Anguilla japonica</i> , live
	0301.92.10.20-9	Eels, <i>Anguilla marmorata</i> , live
	0301.92.10.90-4	Other eels (<i>Anguilla</i> spp.), live <i>Included in 0301.99.29.915 "other freshwater fishes, live" before 2006</i>
	0301.92.20.10-9	Glass eel (> 5000 pcs per kg)
	0301.92.20.20-7	Eel fry (> 500 and < 5000 pcs per kg)
	0301.92.20.30-5	Young eel (elver) (> 10 and < 500 pcs per kg)

Eel production – catch and aquaculture

Global eel production has steadily increased over the last 30 years. Figure 3 shows the important role that eel farming (or aquaculture) plays, with the latter being increasingly responsible for the majority of eel production (nearly 95% in 2012 according to FAO data). Farms are supplied by wild-caught juvenile eels, and although capture production appears to have gradually declined over the years it is important to note that the data presented in Figure 3 (and Figures 4-5 and 7-9) do not differentiate between life stages. Reported aquaculture production is composed of live eels grown to a size ready for consumption (i.e. adults), however capture production includes catch of all life stages – glass eels and larger juveniles for farming and adults for direct consumption. The catch data therefore mask the scale of glass eel catch due to the higher weight of adult eels and the corresponding decline in catch of older life stages.

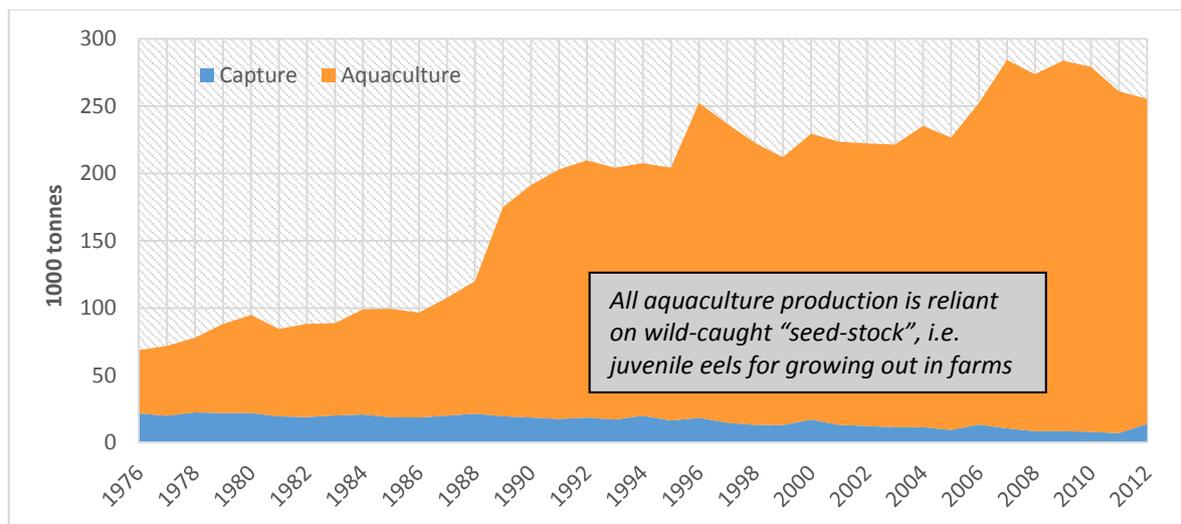


Figure 3 Global *Anguilla* aquaculture and capture production, 1976-2012, 1000 tonnes. *Source:* FAO Fisheries Production data <http://www.fao.org/fishery/statistics/software/fishstati/en> Estimated quantities (F) included. Data do not differentiate life stages.

Figure 4 shows the overall decline of global eel capture combined with the proportionally increasing importance of tropical eel range States over the last few decades. Indonesia and the Philippines are the only countries to report catch to FAO of tropical *Anguilla* spp. under the term “River Eels Nei” (with the exception of small quantities by Australia); all other countries/territories report catch in temperate *Anguilla* species (*A. anguilla*, *A. japonica*, *A. rostrata* or *A. australis*¹⁰). Figure 4 shows that catch from Indonesia is responsible for the majority of the peaks that occur from the early 1990s onwards¹¹; and the Philippines has been reporting regular annual catch between 100 and 500 tonnes per year from 1980 onwards, with catch gradually increasing from 2006 onwards, reaching over 1000 tonnes in 2012 (8% of the global total).

FAO catch data reported as “River eels nei” were compared with the Philippine Bureau of Agricultural Statistics (BAS) data reported as “Igat” (freshwater eel in Tagalog) and these were identical for the last 12 years. Inland fisheries production of “Igat” steadily increased over the last decade, from 200 tonnes in 2002 to over 1000 tonnes (valued at over 100 million Philippine Pesos, PHP) in 2012 (Figure 5). The majority of catch occurs in the main island group of Luzon and within that in Cagayan Valley (see Figure 2 for map of these locations), and the importance of Cagayan Valley increased significantly in 2012 and 2013. It is important to note that catch and trade in *Monopterus albus* (Swamp or Rice Eel), both for local consumption and export within Asia, has been encouraged in recent years due to this species becoming a pest (BFAR, 2013b) and catch of this species is reported to BAS under the same code (Igat) as *Anguilla* at present (E. Ame, BFAR, *in litt.*, June 2014). The 2012 and 2013 BAS catch data presented in Figure 5 (and also in Figure 8) were therefore corrected to take into account Swamp Eel production, based on figures provided by BFAR (see methods).

¹⁰ FAO production (catch and aquaculture) appears to be divided into species based on geographic provenance, which can lead to mis-reporting, in particular where non-native species are farmed (see Crook, 2010).

¹¹ The last two peaks in 2006 and 2012 were caused by large catches reported by Egypt.

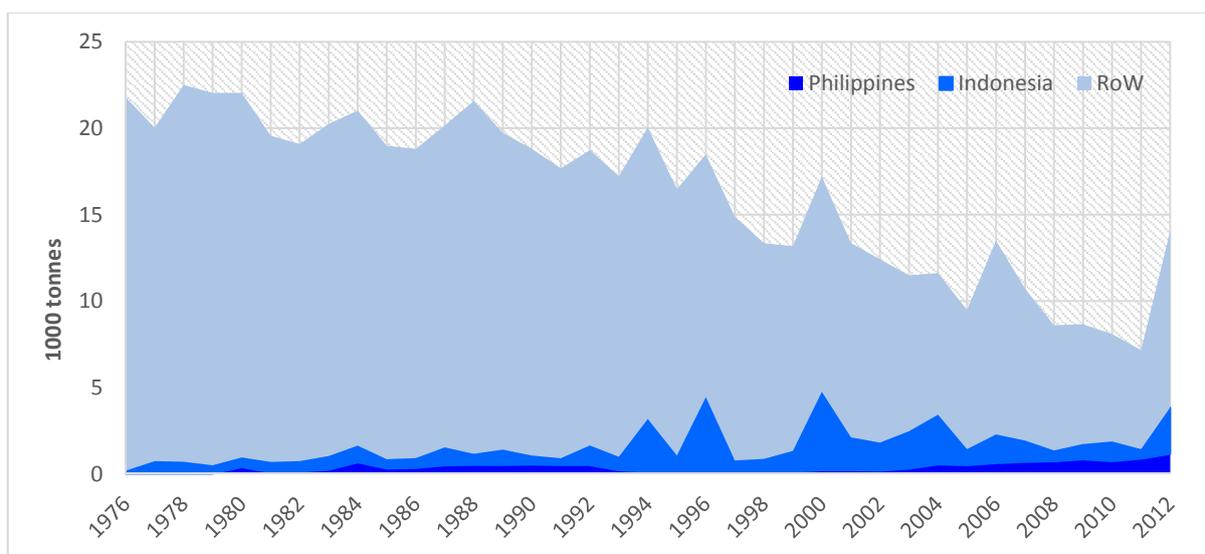


Figure 4 Global *Anguilla* capture production, 1976-2012, 1000 tonnes. *Source:* FAO Fisheries Production data <http://www.fao.org/fishery/statistics/software/fishstati/en>. RoW – Rest of World. Estimated quantities (F) included. Data do not differentiate life stages.

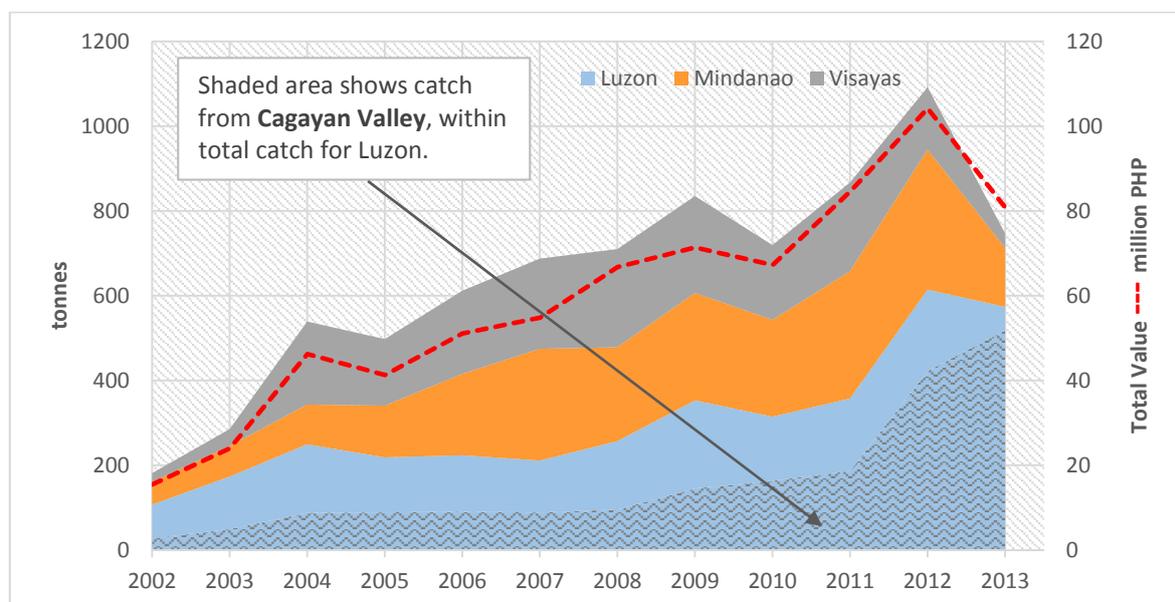


Figure 5 Total “Igat” production (catch) in the Philippines, 2002-2013, tonnes and million PHP. *Source:* BAS Inland Municipal Fisheries: Volume of Production by Species, by Region and by Province: <http://countrystat.bas.gov.ph/?cont=10&pageid=1&ma=D40PNVIP> Weight by main island group with principal producer province Cagayan Valley (within Luzon), highlighted; and total national value. 2012 and 2013 data corrected to take into account Swamp Eel production. Data do not differentiate life stages.

As for FAO data, BAS data available online do not differentiate life stages. Regional catch and fishing effort data specifically focusing on glass eel fisheries, however, have been collected in Cagayan Province since 2007 (Ame *et al.*, 2013). Prior to 2009, the principal collection area for glass eels in Cagayan province was around the Cagayan River. However, with increasing demand for export, fishermen have spread to other river systems draining into the Babuyan channel (Ame *et al.*, 2013). Fishermen in other regions in the Philippines also appear to have started glass eel fishing, in particular around Mindanao from 2008 onwards (J. Wu, TRAFFIC, *in litt.* May 2013).

Figure 6 shows the quantity of *Anguilla* glass eels fished in Cagayan, traded with consolidators (middle-men) in Aparri and on to exporters in Manila, and the total quantity of “live eel fry” reportedly imported into East Asia from the Philippines, between 2007 and 2012. In 2007 glass eel catch traded with consolidators

amounted to ~2.5 tonnes, which then dropped to less than a tonne for several years, increasing again in 2011 (1.5 tonnes) and 2012 (3.8 tonnes). Trade with East Asia shows a similar trend, however, total annual quantities being imported from the Philippines are three to 16 times higher than Cagayan catch. It would be important to establish the reasons for these differences, which may include illegal and unreported fishing, the growing out of eels to larger sizes in the Philippines (and correspondingly greater weight in trade) and/or other regions in the Philippines fishing comparably much higher quantities. See section on live eel trade for further details on glass eel trade, monthly variations in catch and trade, and species involved.

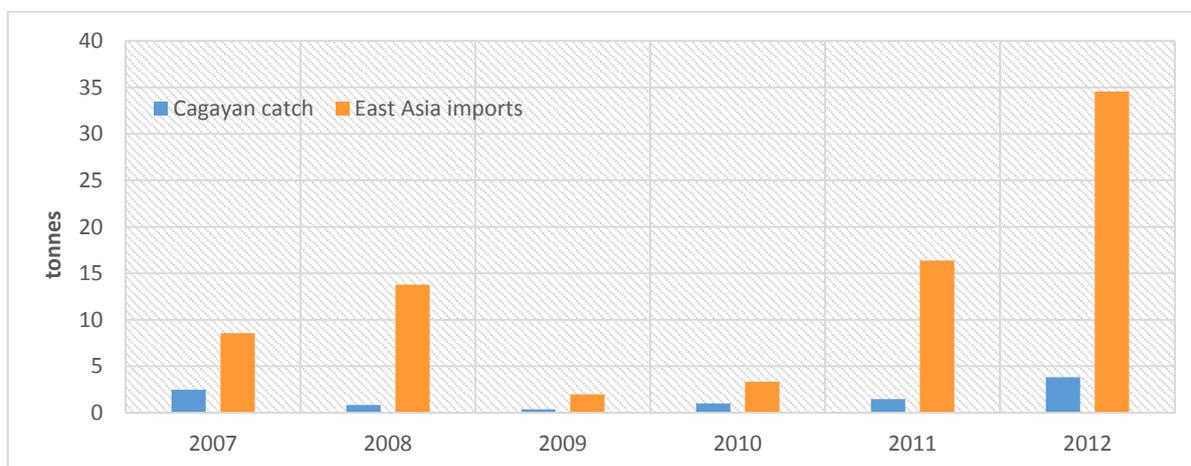


Figure 6 Glass eels caught in Cagayan, traded in Aparri and on to Manila; and East Asian imports of live eel fry from the Philippines, 2007-2012, tonnes. *Source:* Ame et al. (2013); East Asian Customs data - see Figure 10 for details.

According to Ame *et al.* (2013) mean annual glass eel catch per fishermen ranged from 2.7 kg in 2009 to 15.2 kg in 2012. According to fishermen and consolidators interviewed during the scoping trip in May 2013, average annual harvest could reportedly amount to as much as 10-29 kg per gatherer. The number of active fishermen ranged from 20 to 70 between 2007 and 2010, and then increased to 112 and 161 in 2011 and 2012 (Ame *et al.*, 2013). Many of the fishermen that were catching glass eel in 2011 and 2012 were totally new to the industry, attracted by increasing demand and prices. Competition from Mindanao, which is currently experiencing a “development boom” (Anon, 2014b; Satake, 2014), however, was believed to be the cause for an apparent decrease in demand from Cagayan from spring 2013 onwards (J. Wu, TRAFFIC, *in litt.*, May 2013). According to a report by BAS in May 2013, Camiguin in northern Mindanao has an ordinance in place to conserve *Anguilla*, and the total volume of inland fisheries catch decreased in the region in 2013 due to the prohibition of eel fishing (BAS, 2013). This suggests that some other regions outside Cagayan are implementing eel conservation measures. It is critical that experiences and plans of any similar measures be shared and co-ordinated across the Philippines.

To improve monitoring of catch in *Anguilla* species in the future, it would be important to report (and make available) catch of different life stages and of *Anguilla* spp. and *Monopterus albus* separately. According to percentages provided by BFAR, in 2013 ~1750 tonnes of *M. albus* were caught in the Philippines, already over double that of *Anguilla* catch (~750 tonnes of all life stages) (E. Ame, BFAR, *in litt.*, June 2014). This suggests that Swamp Eel is going to be an important commodity in the future, further emphasising the need for separating this species from *Anguilla* spp. in reporting. Reporting *Anguilla* catch to the species level, would also be beneficial. This may be possible for adult catch of the two main species *A. marmorata* and *A. bicolor*, which are easily differentiated. However, as the five native *Anguilla* species are known to co-exist and be harvested together this may be difficult to monitor. Furthermore, identifying these species at the glass eel level is complex (Yoshinaga *et al.*, 2014). However, according to studies carried out in 2011 and 2012, the species composition of glass eels entering the Cagayan River in northern Luzon varies throughout the year, which could facilitate more species-specific data recording (Aoyama, 2013; see section on live eel trade and discussion under monthly trade data of live eel fry).

Eel trade

Live eel trade - general

Anguilla spp. are traded globally as four main commodities – live, fresh, frozen and smoked/prepared eels. According to Philippines export data reported in UN Comtrade, between 2002 and 2013 the Philippines traded predominantly in live eels (on average 1600 tonnes per year), in addition to very small quantities of frozen eels (on average 60 tonnes per year). The following analysis, therefore focuses on live eels only.

Figure 7 shows total global and Philippine exports of live *Anguilla* eels reported under HS code 030192 to UN Comtrade and Figure 8 shows Philippine catch reported to BAS combined with imports and exports of live eels, since 2002 (all life stages grouped together). According to UN Comtrade export data, between 2002 and 2010, the Philippines was responsible for less than 1% of global live *Anguilla* exports, however in 2011 this percentage increased to 7%, then to 24% in 2012 and 44% in 2013 (Figure 7). Total live eel exports from the Philippines in 2011-2013 (~18 000 tonnes) were ten times that during 2004-2010 (~1700 tonnes) and the main destinations of these eels were mainland China, Hong Kong and Taiwan¹². This level of trade with the Philippines was not reported in Asian Customs data, however, and it is therefore likely that non-*Anguilla* eel species are being reported under this Customs code by the Philippines (see section on other live eel below and Table 8 in the Annex).

According to UN Comtrade trade and BAS catch data, in 2002, Philippine catch/imports and exports are comparable, but after this for every year up to and including 2010, catch is higher than exports, with catch being at least double exports in all years (and in some cases considerably higher). This was unexpected, as the Philippines does not reportedly have a large domestic market for eel consumption (E. Ame, BFAR, *in litt*, July 2014). From 2011 onwards, exports became more than catch/imports, with a dramatic increase in 2012 and 2013. It is important to note that the data presented for catch includes the correction for the catch in Swamp Eel which commenced in 2012, however the trade data do not (as it is not known if this definitely includes Swamp Eel). Even when taking this into consideration, exports are considerably larger than catch.

It would be important to determine the reasons for these large differences between reported catch and exports in 2012 and 2013, as this will have significant implications for management. Possible reasons could include use of the incorrect Customs code for exports (see section on other live eel below), large amounts of un-reported or illegal fishing (not being reported in catch data, but being reported in trade data), the growing out of eels in farms to sizes permitted for export, and/or exports of live eels in particular glass eels or other younger eels being reported as gross weight, including packaging (reported as weight of bags which include water). The export data presented in Figures 7 and 8 do not differentiate between life stages, and can therefore not be used to monitor exports of juveniles specifically, however East Asian Customs data can be used for this purpose (see below).

Finally, prior to 2011, the Philippines imported very small quantities of live eels (less than 0.5 tonnes in total since 2004). However, in 2011 and 2012 the Philippines reportedly imported nearly 6 tonnes of live eels from *A. anguilla* range States (Figure 9). Exports of live *A. anguilla* eels (of any life stage) from EU Member States have not been permitted since December 2010. The reported imports from Bulgaria and France may therefore involve illegally exported eels. As part of a Spanish enforcement operation (“Operación Suculenta”) in 2011 and 2012, Bulgaria and the Philippines were identified as transit points for smuggling glass eels out of Europe (see section on enforcement action below). Although eels can be legally exported from Morocco (and other North African *A. anguilla* range States), this route has also been of concern in relation to smuggling from the EU. None of this trade was reported in EU Customs (EUROSTAT) or CITES trade data. The only record of live eel export between the EU and the Philippines between 2004 and 2013 in EUROSTAT was for 100 kg from Romania in 2011 (again, if this occurred, and was *A. anguilla* originating in the EU, this would have been illegal).

¹² Reported under “Other Asia nes”, see methods.

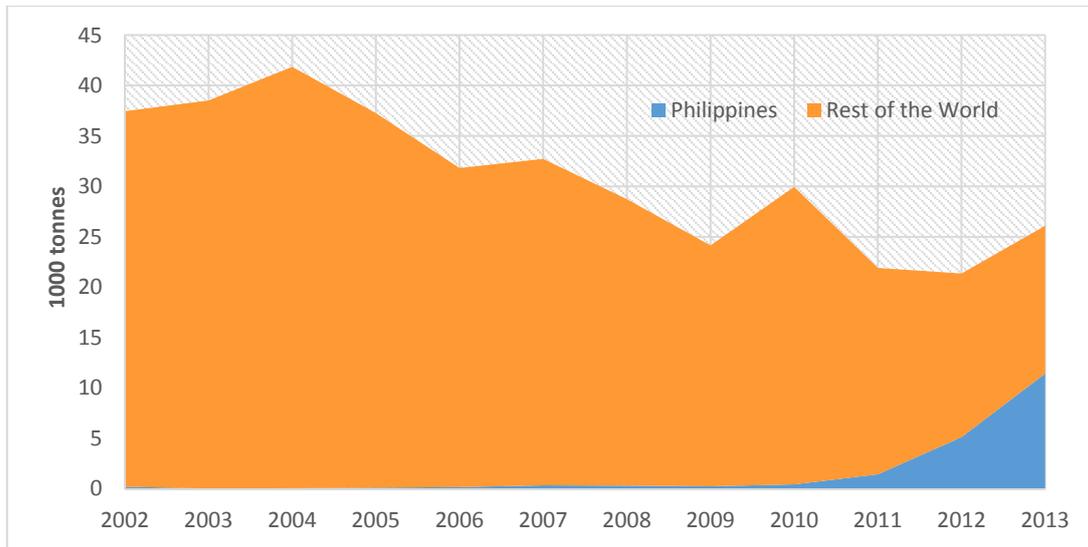


Figure 7 Total exports of live eel, *Anguilla* spp. (HS code 030192), 2002-2013, 1000 tonnes. *Source:* UN Comtrade data: <http://comtrade.un.org/> Data do not differentiate life stages and were not corrected for possible inclusion of Swamp Eel exports (commodity code specifically refers to *Anguilla* spp.).

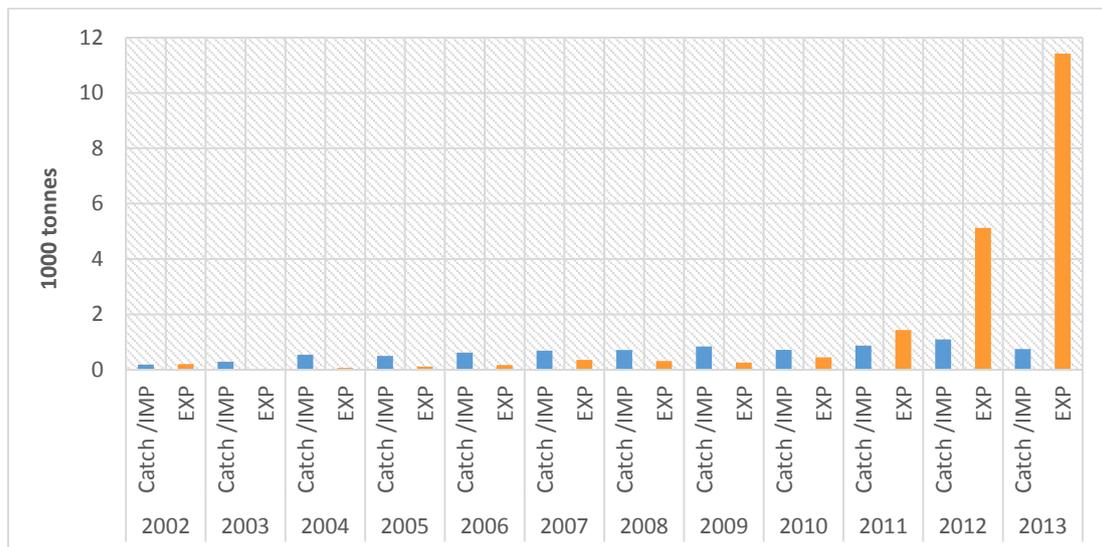


Figure 8 Annual Philippine catch and live eel trade for *Anguilla* species. *Source:* UN Comtrade data: <http://comtrade.un.org/> and BAS data: Inland Municipal Fisheries: Volume of Production by Species, by Region and Province: <http://countrystat.bas.gov.ph/?cont=10&pageid=1&ma=D40PNVIP>. Data do not differentiate life stages and export data were not corrected for possibly inclusion of Swamp Eel exports (commodity code specifically refers to *Anguilla* spp.).

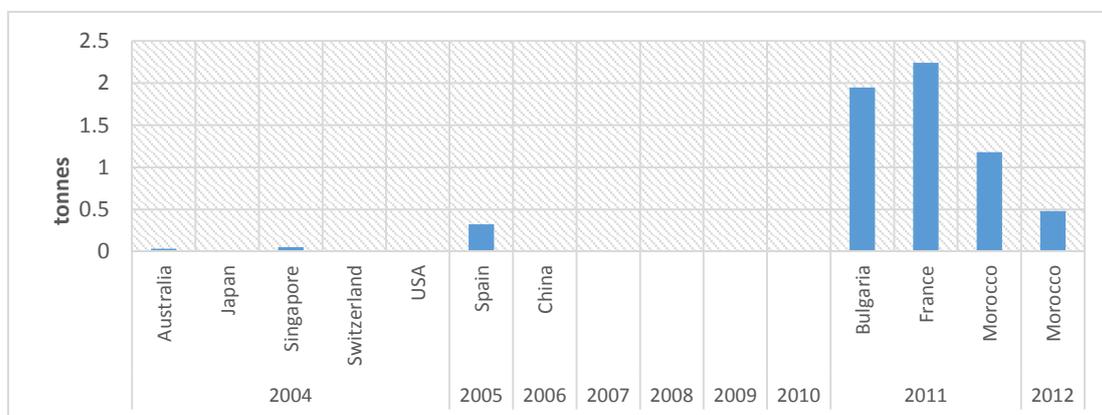


Figure 9 Imports of live *Anguilla* species into the Philippines, tonnes. *Source:* UN Comtrade trade data: <http://comtrade.un.org/> Data do not differentiate life stages.

Live eel trade – glass eel/live eel fry

Trade data

East Asian Customs data differentiate life stages of live eel in trade, either at the basic level of “live eel fry” for farming and “other eel” (mainland China, Hong Kong and Japan) or at a more detailed level of different sizes of juveniles (Korea and Taiwan, see methods for more details). This makes East Asian import data particularly useful for identifying the most important sources of live eel fry (for farming) versus live eels for consumption. In addition, analysis of these data enables monitoring of potential illegal trade. The Fisheries Administrative Order 242 introduced by BFAR in May 2012 bans the export of juvenile eels $\leq 15\text{cm}$ from the Philippines. However, according to Asian Customs import data, “live eel fry” have continued to be imported in large quantities after this ban came into force. In addition, there have been a number of seizures of glass eel shipments, further corroborating this (see enforcement action below).

Table 3 in the Annex shows reported annual imports of live eel fry for farming purposes into the five main East Asian eel trading/producing countries/territories (mainland China, Hong Kong, Japan, Korea and Taiwan) for the last ten years (2004-2013), by source. Between 2004 and 2013, nearly 120 tonnes of live eel fry were reportedly imported by East Asia from the Philippines. The Philippines was the fourth greatest supplier (excluding Hong Kong) of live eel fry over this period, coming after Japan, France and mainland China.

Between 2004 and 2013 total eel fry imports into East Asia gradually declined, however imports from the Philippines increased significantly (Figure 10). Hong Kong was consistently the main importer across these years (from all sources), followed by Taiwan, mainland China, Korea and Japan. The importance of Taiwan and China as importers decreased significantly in recent years, with Korea increasing in importance, in 2013 in particular. The majority of imports from the Philippines came into Hong Kong, and increasingly, Korea.

Figure 11 and Table 4 in the Annex show the changes in source countries/territories before and after 2010. 2010 was selected as a pivotal year, due to the ban in trade in *A. anguilla* from EU Member States from December 2010 onwards (with a few exceptions). The proportional importance of the Philippines as a supplier increased significantly from 2011 onwards - according to East Asian import data the Philippines was the source of 42% and 25% of live eel fry imports in 2012 and 2013, making it the top supplier in these two years. In addition to the Philippines becoming the main supplier in recent years, many other source countries became increasingly important, such as Canada, the United States of America (USA), Viet Nam, Madagascar and Malaysia. Furthermore, the number of different countries/territories supplying East Asia increased from 19 in 2004-2010 to 27 in 2011-2013. Japan continued to supply the greatest quantity within East Asia, however these were predominantly larger sized juveniles almost exclusively destined for Taiwan.

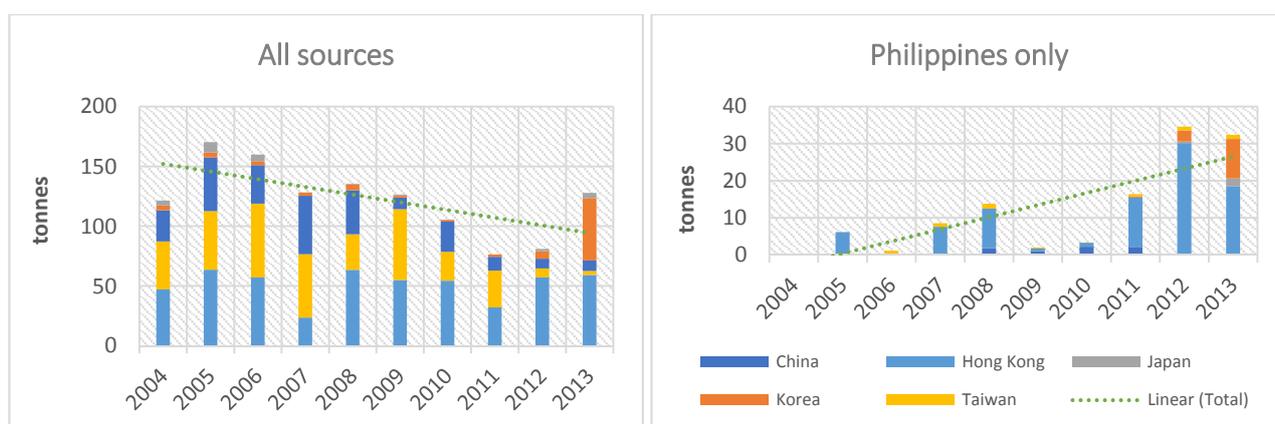


Figure 10 Total annual imports of “live eel fry” into mainland China, Hong Kong, Japan, Korea and Taiwan from all sources and from the Philippines only, 2004-2013, tonnes. *Source:* East Asian Customs data: mainland China requested from the China Customs Information Centre; Hong Kong Trade Development Council http://bso.hktdc.com/bso/jsp/bso_home.jsp; Ministry of Finance, Trade Statistics of Japan http://www.customs.go.jp/toukei/info/index_e.htm; Korea International Trade Association <http://global.kita.net/>; Taiwan Bureau of Foreign Trade <http://cus93.trade.gov.tw/ENGLISH/FSCE/>. All sizes of “live eel fry” for farming grouped together (see Table 1, methods). Excluding Hong Kong as a “source”.

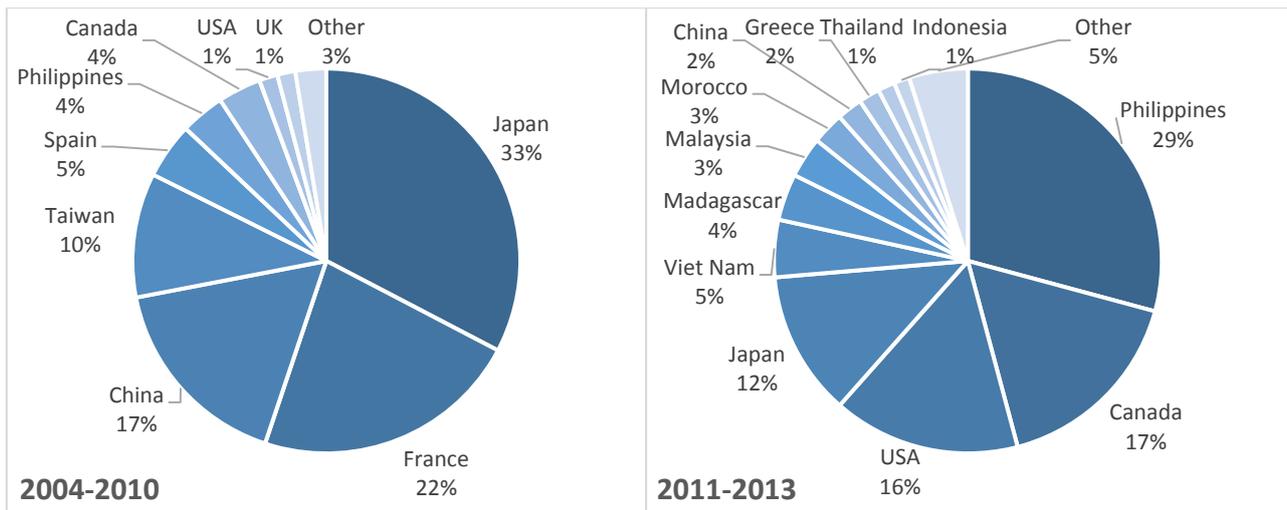


Figure 11 Source of imports of live eel fry into mainland China, Hong Kong, Japan, Korea and Taiwan, percentages of total imports in tonnes for two time periods: 2004-2010 and 2011-2013. *Source: East Asian Customs data, as Figure 10. Excluding Hong Kong as a "source".*

Figure 12 shows monthly live eel fry imports from the Philippines into East Asia for 2011-2013. There was considerable variation between years in the quantities imported each month, however overall the majority of live eel fry was imported into East Asia in April, with February-March and August-November also being important months. As was noted above, Korea considerably increased in importance as a destination in 2013, importing over 10 tonnes, nearly 5 tonnes in April alone (see eel sizes reported by Korea below).

Ame *et al.* (2013) reported that glass eels were available all year round in Cagayan (northern Luzon) between 2007 and 2012, the highest catch (and fishing effort) occurring in March, and the lowest catch in November and December. 2011-2013 East Asian import data suggest a similar pattern, with a high level of import in April, and low levels in December and January (allowing for a few weeks/one month delay for distribution/export by traders). On the other hand, online advertisements and fishermen in Cagayan Province (J. Wu, TRAFFIC, *in litt.* May 2013) indicated the main season in northern Philippines was October to February. Establishing peak fishing and trading seasons in the Philippines is further complicated by the fact that fishing for glass eels is known to occur in other regions such as Mindanao, they may vary between years, some of the live eel fry may be kept/grown out in farms in the Philippines for a few months prior to export, and there are different species involved.

There is currently a large difference in the survival rate of different tropical species being farmed in East Asia, with *A. bicolor* and *A. marmorata* showing the best results (T. Moriyama, Japan Eel Importers Association, *in litt.*, July 2014). Identifying the best months and areas for fishing these species, and *A. bicolor* in particular (being the preferred species on Japanese markets) would have important conservation and commercial consequences. Korean traders based in the Philippines have already reportedly been targeting harvests with a high percentage of *A. bicolor*¹³.

Aoyama (2013) studied the species composition of glass eels recruiting in the Cagayan River between November 2011 and November 2012. *Anguilla marmorata* dominated from January to May, with a peak in March (this species making up 97.9% of the sample) and April (98.7%). According to East Asian trade data for 2012, the majority of imports from the Philippines occurred in February, March and April, which suggests that most of these were *A. marmorata*. *Anguilla bicolor* was mostly found in samples taken between October and December. However, proportions varied between years - in November 2011, *A. bicolor* made up 95% of the sample, but in November 2012, only 41% was *A. bicolor* and 49% *A. marmorata*. *Anguilla luzonensis* appeared mainly in the summer months, from June (87%) to September (75%), with a peak in July (97%).

¹³ <http://glasseelsdavid.pixnet.net/blog/post/10189699-%E9%9B%99%E8%89%B2%E9%B0%BB%E9%B0%BB%E8%8B%97%E7%9A%84%E7%94%A2%25%E2%80%A6>

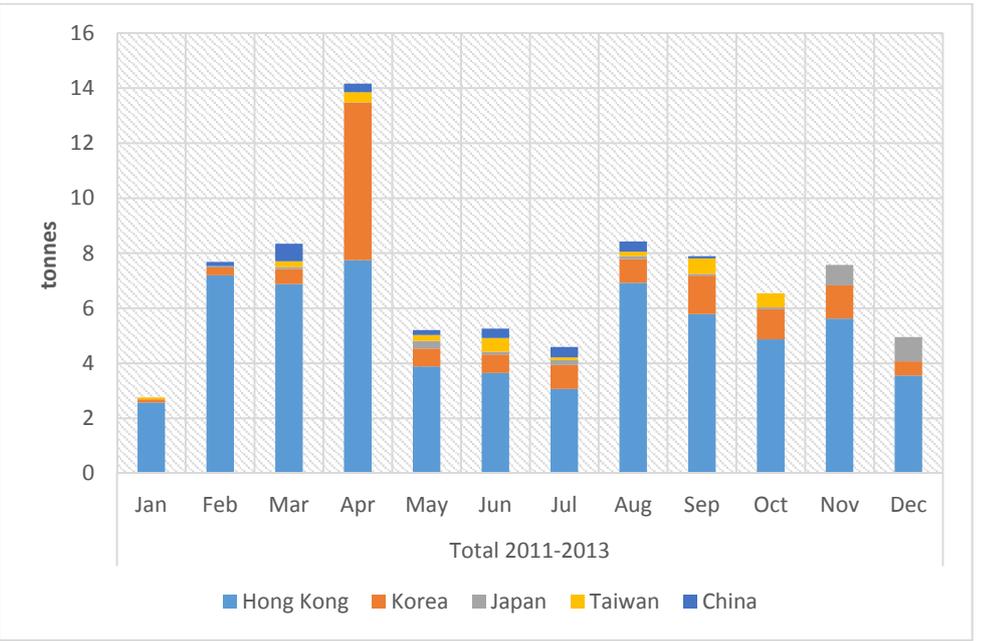
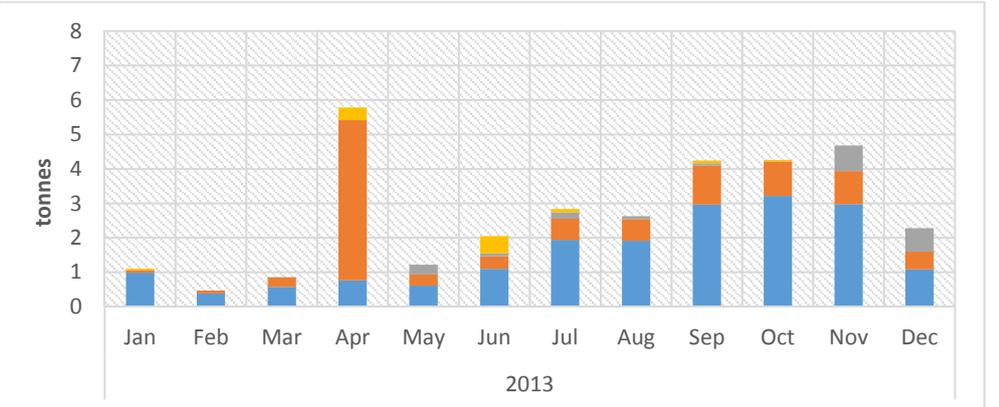
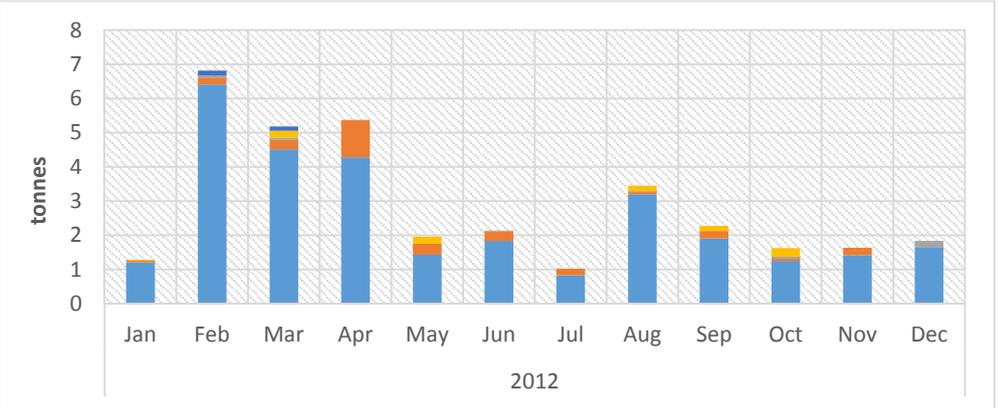
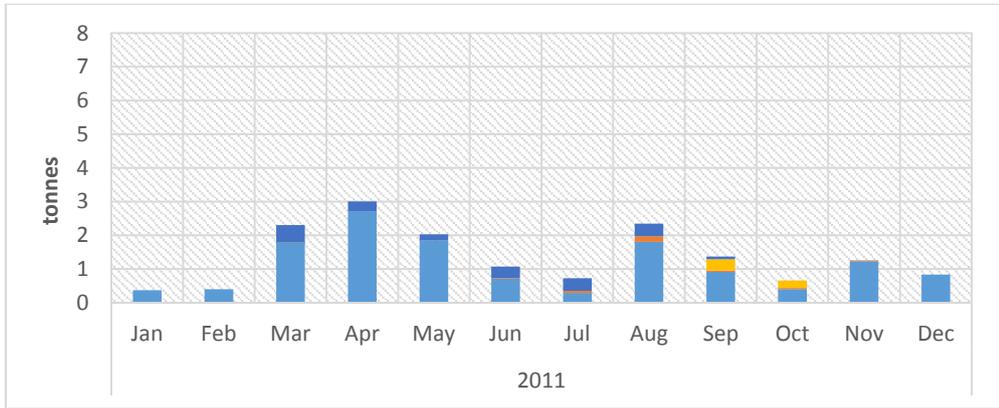


Figure 12 Reported monthly imports of “live eel fry” from the Philippines, into mainland China, Hong Kong, Japan, Korea and Taiwan, 2011-2013, tonnes.

Source: East Asian Customs data, as Figure 10. All sizes of “live eel fry for farming” grouped together.

Although catch data from Cagayan (Ame *et al.*, 2013) and East Asian import data suggest that catch and trade in summer months (when *A. luzonensis* is prevalent; Aoyama, 2013) is lower than the rest of the year, as this is a newly discovered species with a restricted distribution, precautionary measures such as introducing and enforcing controls over fishing and trade in these months in particular should be considered.

In a separate study, which analysed the composition of a glass eel shipment seized by BFAR in September 2012 (see Table 2), 87% were *A. bicolor pacifica* and 17% were *A. marmorata* (Asis *et al.*, 2014; Anon, 2014c). These proportions contrast with those identified by Aoyama (2013) in August/September 2012, suggesting these eels may have originated from a different region in the Philippines. Further research into species composition in the Philippines, including in Mindanao, is underway (T. Yoshinaga, Kitasato University, *in litt.*, June 2014).

At the time of writing this report, monthly Customs data for 2014 were available only for January to April for all East Asian countries/territories. When comparing source countries/territories and quantities of live eel fry traded in the first four months of years 2011-2014, totals in 2011 and 2014 were similar (25-26 tonnes, excl. Hong Kong as source), and higher in 2012 and 2013 (42-49 tonnes). 2010-2013 were years¹⁴ of low recruitment of *A. japonica* (Anon, 2014d), with 2012 and 2013 being particularly low in Japan and Taiwan, suggesting that imports from other countries/territories increased to compensate for this. In 2012 and 2013 live eel fry imports into the rest of East Asia from Japan were minimal between January and April (under 3 kg), however, imports from Japan in the first months of 2014 (and 2011) were nearly 5 tonnes. Imports from the Philippines correspondingly decreased in the early months of 2014, with only two tonnes imported in January to April 2014, versus ~8, 19 and 6 tonnes in the same months of 2013, 2012 and 2011 respectively.

Korea introduced more detailed Customs codes for live eels for farming in 2013, separating live eel fry into two sizes: glass and young (see Table 1 in methods). Figure 13 shows that in 2013 most glass eels imported into Korea originated in the Philippines (6.4 tonnes) and most of the larger sized eels were imported from the USA and Viet Nam. The large import in April of live eel fry shown in Figure 12 was actually composed of “young eel” (4.2 tonnes), with all other imports in 2013 being of glass eels. Total Korean imports of glass and young eel for farming in 2013 were much higher than imports of “live eel fry” in previous years, and as this coincided with the change in Customs codes, the fact that these young eels may previously have been recorded under “other eel” and gone undetected must be considered. However, there was no corresponding decline in “other Eel” imports for 2013 (see section on live eel trade - other eel, below).

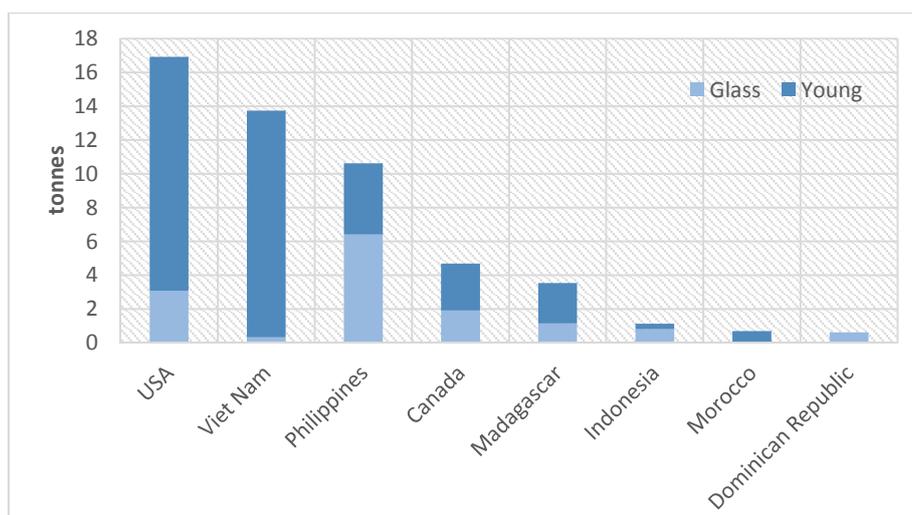


Figure 13 Korea imports of two sizes of “Live eel fry” in 2013 by source, tonnes. *Source:* Korea International Trade Association <http://global.kita.net/>. Glass eel - 030192100 and Young eel (exceeding 0.3g and not exceeding 50g per individual) – 030192200. Excluding Hong Kong as a “source”. Haiti, Timor-Leste, mainland China and South Africa supplied <100 kg.

¹⁴ The *A. japonica* fishing season in East Asia spans ~November to May, and the years quoted refer to the year in which the season ends.

Figure 14 shows the different sizes of live eels for farming imported into Taiwan from the Philippines in 2011-2013. Sizes in trade vary considerably between years, with glass eels being the main commodity in 2012, whereas in 2011 and 2013, the largest size “elver” was mainly imported. Over half a tonne of glass eels were imported into Taiwan after May 2012 (between August-October), and 0.22 tonnes in 2013.

Taiwanese and Korean data therefore show that the smallest size (glass eels) were definitely still being sourced from the Philippines when export was not permitted. Customs codes for different sized juvenile eels used in Korea and Taiwan (and the EU¹⁵), however, use different units which are not directly comparable and make more detailed analysis very difficult. Taiwan uses number of eels (pieces) per kg, Korea uses weight in grams per eel and the EU uses size in cm of each eel. Converting Korean sizes to equivalent units used by Taiwan (assuming 5000 individuals of glass eels per kg) means that the young eel is equivalent to >3300 and <20 pcs per kg, which spans two of the Taiwanese categories. It would be beneficial for all countries/territories trading in these commodities to consider introducing similar size categories.

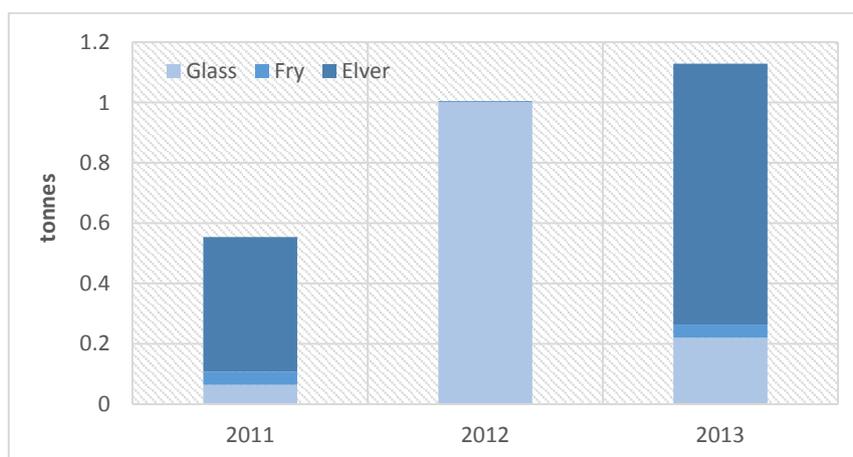


Figure 14 Taiwan imports of three sizes of “Live eel fry” from the Philippines, 2011-2013, tonnes.

Source: Taiwan Bureau of Foreign Trade <http://cus93.trade.gov.tw/ENGLISH/FSCE/>. Glass >5000 pcs per kg - 03019220-109; Fry >500 and <5000 pcs per kg - 03019220-207; Elver >10 and <500 pcs per kg - 03019220-305.

Advertisements/companies

Alibaba, EC21, F&B Online, TradeKey and Weiku B2B trade platforms were searched in July 2014 for “glass eel” and “eel fry” advertisements (see methods for more details). Searching for “glass eel” resulted in the highest number of results - 150 advertisements across four sites¹⁶, versus only 10 for “eel fry”. The highest number of glass eel advertisements were found on Alibaba (61), followed by F&B Online (44). 30% of all advertisements across the four sites were from companies reportedly based in the Philippines, followed by the USA (15%), Indonesia (10%) and Thailand (7%) (Figure 15). The locations of countries/territories currently advertising on B2B trade platforms are comparable to those involved in glass eel trade in 2011-2013 according to East Asian live eel fry import data (Figure 11).

Alibaba.com was the preferred platform for companies from most countries/territories, with the exception of the Philippines and Indonesia, for which F&B Online appeared to be more popular. TRAFFIC has been collaborating with various Beijing-based B2B platforms in recent years, informing them of advertisements on their platforms that involve potentially illegally sourced species/specimens (TRAFFIC, 2013). In July 2012, TRAFFIC surveys found almost 50 advertisements from businesses in the Philippines offering eel fry or glass eels for sale and export on Alibaba.com. TRAFFIC contacted Alibaba.com about these potentially illegal exports, and the company responded by removing the suppliers from its website (TRAFFIC, 2012).

Alibaba.com was searched again in November 2012, and there was only one advertisement for glass eels/eel fry from a company reportedly based in the Philippines, and three from companies based in Korea, but

¹⁵ The EU also introduced Customs codes for different sizes of live *Anguilla* eel in 2012: 03013210 <12cm, 03019230 >12 <20 cm, 03019290 >20 cm.

¹⁶ Excluding Weiku, see methods.

supplying eels of Philippine origin. In July 2014, the numbers of advertisements on Alibaba from glass eel suppliers based in the Philippines had increased slightly (to five), however, there were many more on the other B2B platforms. The Philippines was the main country/territory of origin/seller location on EC21, F&B Online and TradeKey, which suggests sellers simply moved elsewhere when their adverts were removed from Alibaba. It would therefore be very important to collaborate with all these B2B platforms in the future and to share information with them concerning all countries/territories where export bans are known to be in place, currently including the Philippines, Indonesia and the Dominican Republic.

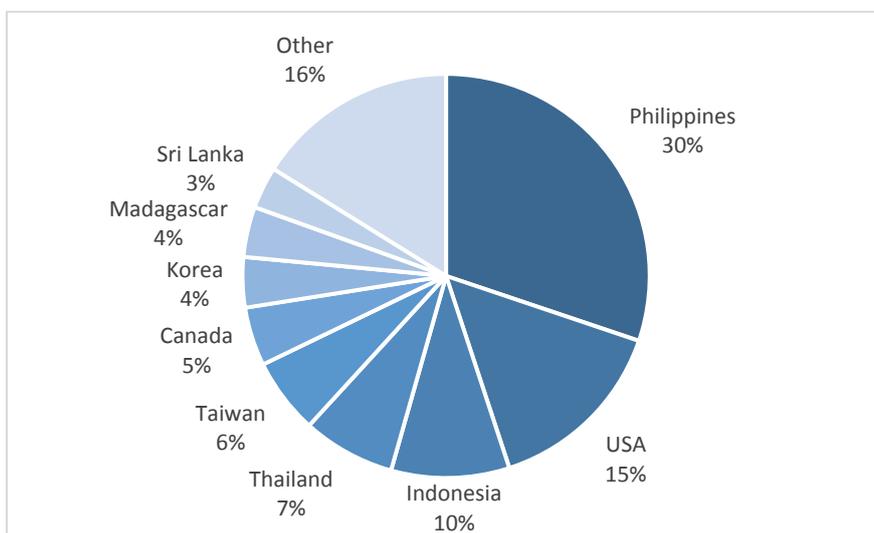


Figure 15 Reported locations of companies advertising “glass eel” on four global B2B trade platforms in July 2014. *Source:* Alibaba, EC21, F&B Online and TradeKey.

Table 5 in the Annex shows details of the companies found advertising live glass eels reportedly sourced from the Philippines on Alibaba, EC21, F&B Online, TradeKey and Weiku in July 2014. Table 6 shows screen shots of the relevant advertisements. Twenty companies were reportedly based in the Philippines, three were located in Korea and one each in Thailand, Malaysia, Taiwan and Hungary. Five of these companies had at least one alternative name and/or two addresses (with the same contact person provided). *Anguilla bicolor* was the most commonly advertised species (either or both sub-species offered by 15 companies), followed by *A. marmorata* (11) and *A. japonica* (10), with most companies offering several species or “mixes”.

One company (Eve Eels) specified that no *A. japonica* was available in the Philippines, whereas another (Eico Marine Products) claimed that they were the “only eel farm in the Philippines that cultivates and breeds 100% *A. japonica*”. This company also offered a so-called species “*Anguilla tapika*” which “is the newest replacement for hard to find *A. japonica*, with the same texture, taste and lots of fats. Better than *A. mossambica*”. Recent research suggests that *A. japonica* is present in only small quantities in northern Philippines and its abundance varies greatly between sampling months (Aoyama, 2013; Yoshinaga *et al.* 2014). In 2013 several Japanese middlemen reportedly purchased eels in the Philippines incorrectly described as “Japanese Eel” - these were later identified as other *Anguilla* species (Shiotsuki, 2013; Yoshinaga, 2013).

Most companies on the B2B platforms claimed they could supply between 300 and 1000 kg of glass eels per month, with the maximum being three tonnes per month. A consolidator in Aparri reported being able to supply a similar quantity - on average 400 kg per month (J. Wu, TRAFFIC, *in litt.* May 2013). B2B advertisements suggested the main supply season was November to February, which is comparable to the peak season reported by fishermen in Cagayan Province (J. Wu, TRAFFIC, *in litt.* May 2013). Some companies said they could supply from October to July, depending on the species and sizes required. Five of the Philippine-based companies promoted the fact that they have many years’ experience supplying clients in mainland China, Hong Kong, Japan, Korea and Taiwan. Several appear to be well established companies that

have recently added glass eels to their seafood products offered for sale, which include abalone, crab, lobster, prawns, sea cucumbers, seahorses, shrimp and tuna.

Several companies based in Metropolitan Manila were advertising on B2B trade platforms. Information obtained from consolidators in Aparri (Cagayan) in 2013 suggested there were at least six glass eel exporters of Philippine, Chinese and Korean nationality, based in Manila (J. Wu, TRAFFIC, *in litt.*, May 2013). In addition to these companies, suppliers/traders were spread across all of the Philippines main island groups: Babuyan Island and Catanduanes (Luzon), Bulacan (Visayas), and Basilan, Davao and General Santos (Mindanao). Two companies specified getting their supplies from northern Luzon. Babuyan Island Northern Phils Aqua Hatchery offered eels of five different sizes, collected in the Babuyan Islands, then shipped to a nursery in northern Cagayan province where they are allowed to rest for 7 - 30 days prior to transfer to Manila, where they are kept in a “hatchery” four miles from Manila airport, allowing for inspection prior to purchase. Northern Cagayan Aquatic Resources reported having its main headquarters in Aparri and Santa Ana, but now having opened an office in Manila, due to increased demand for the quality glass eel caught in northern Cagayan. This same company was advertising glass eels on the Philippines classified advertisement website olx.ph in July 2014¹⁷.

BAS catch data (Figure 5), trade advertisements (Table 5) and further research suggest that, in addition to Cagayan, Mindanao is becoming an increasingly important region for eel fishing and farming. Anecdotal reports indicate that there are many small scale eel nurseries operating in South Cotabato, North Cotabato and Maguindanao areas in Mindanao (R. Ortega, Inland Fisheries & Aquaculture Division, BFAR, *in litt.*, May 2014). A search on the Philippines classified advertisement website olx.ph in July 2014 resulted in two advertisements for glass eels/farming from this region¹⁸. A Japanese language Facebook page on eel farming titled “Eel of Davao” suggests that they are farming *A. bicolor* and *A. marmorata* and to a lesser extent *A. japonica*¹⁹. When contacted for more up to date information, the company stated they were still farming *A. bicolor* and *A. marmorata* mix (Eel of Davao, *in litt.*, July 2014). With support from Japanese investors, Equiparco Construction, a large construction company in Mindanao, has reportedly been farming eels to 15 cm and exporting these to Japan since the end of 2013. This company has received the Japanese Agricultural Standard (JAS) certification (which facilitates the traceability of products²⁰), and is planning on building a processing facility and exporting other eel products to Japan in the future (Anon, 2014b).

Other Japanese media reports and company websites suggest that several companies in Japan are specifically importing eels larger than 15cm²¹, which have been grown out to permitted export size in the Philippines (Anon, 2014e). The company JP Unagi Inc. claims to be trading legally as it has an “official export permit” from the Philippine government. On its website it mentions being able to provide juvenile eels that have been grown out from glass eels in the Philippines using feed imported from Japan, however it also suggests that glass eels can be exported directly (as do other Japanese trading companies)^{22,23}. One Philippine-based company (Eels for Less) was offering both eels and eel feed for sale on Alibaba. The eel feed was reportedly “proven for Philippine and Southeast Asian eels”. Another seller (“selvy”), with a factory reportedly based in Plaridel, Bulacan, was found advertising glass eels, larger juveniles and eel feed (both locally produced and imported from Japan and Taiwan) on the Philippine classified advertisement website olx.ph²⁴. This seller promoted having a farm and being the largest glass eel exporter in the business, having been exporting to mainland China, Hong Kong, Korea, Japan and Taiwan for more than five years.

¹⁷ <http://olx.ph/43937342>: “Aparri, Cagayan is known for a huge population of *Anguilla bicolor*, *pacifica*, and *japonica*. We have been supplying eel fry to our clients for several years now. We can deliver 300 to 900 kilograms / week. And we can deliver to any point of Luzon or Manila. Our packaging is export ready. Upon arrival of the goods to Manila, we replace the water and refill the bag with oxygen. Each bag is weighed at 1 kilogram containing approximately 6,000 pieces of healthy eel fry.”

¹⁸ <http://olx.ph/45502550>: “Davao Del sur is known for a huge population. We have been supplying eel fry to our clients for several years now. We can deliver 300 to 600 kilograms / week to any point of Luzon, Manila or overseas. Our packaging is export ready.” <http://olx.ph/48323381>: South Cotabato “Eel fry for sale. 1-3g average weight, 2 weeks weaned to fry. Export packing”.

¹⁹ <https://ja-jp.facebook.com/davaoeel>

²⁰ <http://www.maff.go.jp/e/jas/jas/system.html>

²¹ This size eel is often referred to as “Curoco” in adverts (using various different spellings).

²² <http://www.unagi.info/index.html>

²³ http://www.ietro.go.jp/tppoas/anken/0001140000/1140594_j.html#

²⁴ <http://olx.ph/48486317>; <http://olx.ph/48076804>; <http://olx.ph/48467804>

Finally, it is interesting to note that according to Gutierrez (1977), in the late 1970s there were four known *Anguilla* eel culture projects in the Philippines, three in Luzon and one in Mindanao. The Fisheries Administrative Order 107²⁵, which banned the export of juvenile eels $\leq 15\text{cm}$ between 1973 and 1986, reportedly benefitted these companies greatly, ensuring there were enough glass eels to supply the local farms and keeping prices down. The main problem hampering progress was supposedly the high cost of feed (Gutierrez, 1977).

Enforcement action - seizures/operations

Since the ban on export of juvenile eels $\leq 15\text{cm}$ from the Philippines in May 2012, information on three seizures by Philippine authorities has been made publically available. These were shipments of glass eels destined for Hong Kong, Taiwan and Korea. The Philippines was also identified as a potential transit point for illegal trade in *A. anguilla* as part of another seizure and wider operation involving European authorities. Further details of these four seizures are provided in Table 2.

Table 2 Summary of publically available information on seizures of glass eels involving the Philippines.

Seizure Date/ Location	Transport/ Trade Route	Shipment Details	Further details	Sources
17/12/2012 Ninoy Aquino International Airport, Manila	Philippines → Korea Cebu Pacific flight FJ 190 Manila to Seoul	9 plastic bags in 7 boxes of glass eels (100 000 eels)	Boxes were checked in by Korean national Cho Young Sok bound for Incheon, Korea. Sok's request for quarantine clearance was denied upon identification of the contents by quarantine officers.	http://news.pia.gov.ph/index.php?article=1851355882957
16/09/2012 Export Division, Pair Cargo warehouse, Terminal 1, Ninoy Aquino International Airport, Manila	Philippines → Taiwan China Airlines flight CI 712 Manila to Kaohsiung	256 kg of glass eels (13 boxes)	Initially declared as "live tropical fish". Unidentified person brought boxes to a trade control examiner at Pair Cargo warehouse. When Customs officer started opening the boxes to inspect their contents, the person left the shipment, saying he would return to bring the documents, but he did not.	http://www.interaksyon.com/article/43348/1-12-m-worth-of-banned-eel-fry-intercepted-at-naia http://www.philstar.com/metro/2012/09/18/850125/boc-intercepts-p7-m-taiwan-bound-baby-eels
08/07/2012 Maiscor warehouse, near Terminal 1, Ninoy Aquino International Airport, Manila	Philippines → Hong Kong Cathay Pacific flight CX 904 Manila to Hong Kong Originating in Cagayan province	332 plastic bags in 46 boxes of glass eels, gross weight 949 kg	Were scheduled to be shipped by company Expertrans. Reportedly abandoned when Expertrans asked about their contents.	http://www.bfar.da.gov.ph/pages/AboutUs/news/boxesofethreatenedelvers_10July12.html http://www.philstar.com/headlines/2012/07/09/825945/baby-eels-bound-hong-kong-seized
12/2011 Sofia Airport	Spain → Bulgaria → Philippines Private Charter flight from Galicia to Sofia, then postal shipment to Philippines Originating in Spain and possibly Portugal	120 kg glass eels Price 450 EUR/kg declared from Spain to Bulgaria, changed to 45 EUR/ kg for leaving Bulgaria	Intercepted by Customs in Sofia airport, in postal shipment. Final destination believed to be mainland China. Seizure arose as part of Spanish Operation "Suculenta".	<i>In litt</i> , Spanish CITES Management and Enforcement Authorities; http://sofiaecho.com/2011/12/29/1735858_customs-officers-at-sofia-airport-seize-120-kg-of-endangered-anguilla-eels http://www.fis.com/fis/worldnews/worldnews.asp?monthyear=&day=26&id=50962&l=e&special=&ndb=1%20target

²⁵ <http://www.bfar.da.gov.ph/LAW?fi=223#post>

The Spanish enforcement operation focusing on illegal trade in eels "Operación Suculenta" commenced in October 2011 and was conducted by the Environmental Procedure Central Unit (UCOMA) of the Nature Protection Service (Seprona) of the Guardia Civil. One and half tonnes of glass eels valued at over EUR 1.6 million were seized, of an estimated five to six tonnes illegally exported out of the EU during the 2011-2012 European glass eel fishing season (from approximately October to May). Fourteen people were arrested, including Spanish, Romanian and Bulgarian nationals.

The glass eels came from Spain and Portugal - they were purchased in Asturias and Galicia and then mislabelled (both origin and product type/value) to enable export to Asia. Products were labelled as "Fish-eel", *A. rostrata*, chilled fish (dead, ready for consumption), fishing worms or baby *Mugil cephalus* (Flathead Mullet). For example, boxes full of mullet were stacked on top of those with glass eels, in the hope that the latter went unchecked. Illegal activities involved a network of several companies. Most of the people involved had been working in the eel farming and marketing sectors for years, however some new "opportunistic" traders were also identified, such as transport companies.

Spanish and Bulgarian authority collaboration as part of this operation resulted in the seizure of 120 kg of glass eels in Sofia airport (destined for the Philippines) in December 2011. It is believed that the Philippines was being used as a transit country, when there was a high risk of shipments being seized if sent directly to mainland China or Korea. On permits accompanying the shipment from Spain to Bulgaria, the value was declared as 450 EUR/kg (total value EUR 54 000). In Bulgaria this was changed to 45 EUR/kg (total value EUR 5400) (A. Galilea Jiménez, CITES MA Spain; J. M. Vivas Prada, Guardia Civil; *in litt.*, July 2014).

Intelligence collected as part of the Spanish operation is corroborated by the Philippines import data for 2011 (see Figure 9). Together with information obtained from East Asian 2012-2014 eel fry import data, seizures and online advertisements (showing that shipment of eels below the size authorized to be exported from the Philippines has been ongoing since May 2012), this highlights the usefulness of analysing various sources of information to identify the potential scale and routes used for illegal trade. Finally, in addition to these published sources, anecdotal information acquired from traders and other stakeholders can be a useful basis for further research. For example, there have been unconfirmed claims that Malaysia and Thailand are being used as transit countries for eels being smuggled out of Indonesia and the Philippines to East Asia.

Live eel trade – other live eel

Table 7 in the Annex shows annual imports of "other live eel" (not for farming purposes) into the five main East Asian eel trading/producing countries/territories for the last ten year period 2004-2013, by source. Mainland China and Taiwan were by far the main suppliers of other live eel (having been produced from live eel fry imported into farms and grown out there), responsible for over 90% of trade. These were followed by Indonesia, Bangladesh, Australia and the Philippines. According to East Asian import data, nearly 1400 tonnes of other live eel was imported from the Philippines between 2004 and 2013.

Other live eel imports into East Asia declined significantly during this period, from over 30 000 tonnes in 2004 to fewer than 8000 tonnes in 2013. However, as for eel fry imports (see Figure 10), imports from the Philippines increased significantly from 17 tonnes in 2004 to 437 tonnes in 2013, making up 5.5% of East Asian imports in 2013 (Figure 16). Japan was consistently the main importer across these years (from all sources), however the majority of imports from the Philippines came into Hong Kong and mainland China.

It is important to note that there appears to be a large discrepancy between the Philippines export data downloaded from UN Comtrade (and presented in Figures 7 and 8) and the import data reported by Asian Customs²⁶. Table 8 in the Annex shows Philippine live eel exports to mainland China, Hong Kong, Taiwan, Korea and Japan (the destinations of over 99.5% of Philippine exports) reported in UN Comtrade and imports of live eel (live eel fry and other live eel grouped together) from the Philippines into these five countries/territories according to their Customs data. Although both datasets show a similar trend and

²⁶ Import data reported by mainland China, Hong Kong, Taiwan, Korea and Japan in UN Comtrade are comparable to the Customs import data acquired individually from these countries/territories.

increase in trade from the Philippines over the last decade, every year UN Comtrade export data show much higher total values, ranging from 2.5 times (in 2005) to 25 times (in 2013) greater.

Taiwan has the most detailed Customs codes for eel commodities within the region, and in addition to different sizes of eel fry for farming, it reports “other live eel” imports according to different *Anguilla* species (*A. japonica*, *A. marmorata*, other *Anguilla* spp.)²⁷, “Australian eels” and “Swamp eels”. Taiwan reports trade in live Swamp eels under code 03019921-003 (a detailed extension of HS code 030199 for “other live fish” which can include a large number of unknown species)²⁸. Figure 17 shows Taiwan imports of Swamp eel from the Philippines in recent years. There was no reported trade before 2009, but in 2012 and 2013 annual imports reached 200-250 tonnes. As Taiwan (and all other East Asian destinations) reported much fewer imports of live *Anguilla* species from the Philippines than Philippines reported exports, it is possible that some of this trade was in fact Swamp eel (*Monopterus albus*) and was reported under different Customs codes by the exporter and importers. This would not explain the entire difference between datasets however, which for Taiwan, for example, in 2012 and 2013 was 1100 and 1800 tonnes respectively (see Table 8 in Annex).

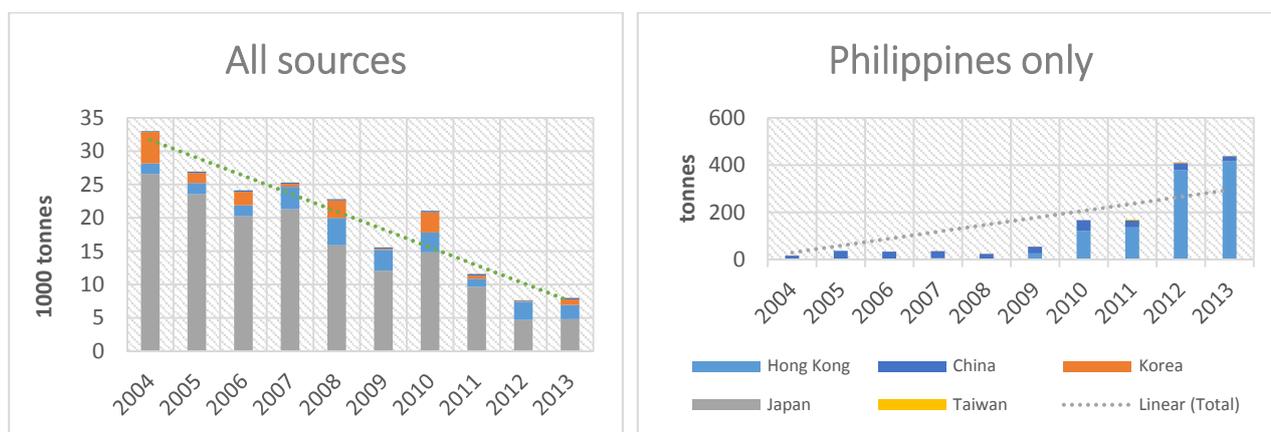


Figure 16 Total annual imports of “other live eel” into mainland China, Hong Kong, Japan, Korea and Taiwan from all sources and from the Philippines only, 2004-2013, tonnes. *Source:* East Asian Customs data, as Figure 10.

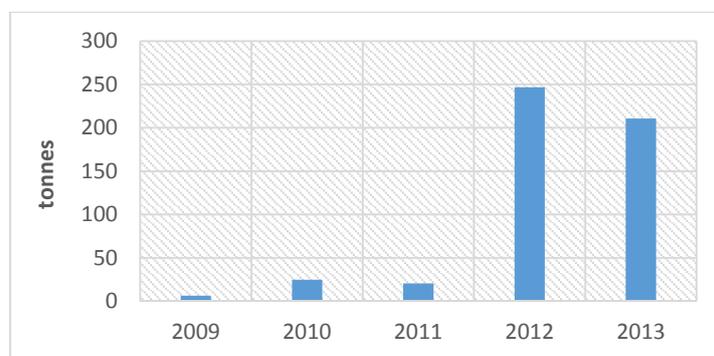


Figure 17 Taiwan imports of live Swamp Eel (Customs code 03019921-003) from the Philippines, tonnes. *Source:* Taiwan Bureau of Foreign Trade <http://cus93.trade.gov.tw/ENGLISH/FSCE/>.

Many of the Philippine-based companies found offering glass eels on B2B trade platforms were also offering other sizes of eel for sale – ranging from larger juveniles destined for farming to larger eels/adults for consumption (Table 5 in the Annex). In addition to these, there were a number of different companies offering purely larger size eels, such as Kumagai Shoji Co. Inc.²⁹, Caraga Seabounty Co. Ltd.³⁰, Kingsway Export and Fashion Accessories³¹ and Asbig Asia Inc.³².

²⁷ The 2011 import into Taiwan from the Philippines was reported under the species-specific code *A. marmorata* 03019210-209.

²⁸ Taiwan’s detailed classifications of commodities can be searched here: <https://fbfh.trade.gov.tw/rich/text/indexfHE.asp>

²⁹ <http://uk.alibaba.com/product/147893067-Live-juvenile-and-adult-eel.html>

³⁰ <http://uk.alibaba.com/product/141943714-LIVE-EEL.html>

³¹ <http://uk.alibaba.com/product/139255679-Live-eel.html>

³² <http://uk.alibaba.com/product/151529320-LIVE-EEL.html>

Farming and the market for Philippine eels in East Asia

In 2012 and 2013, imports of *Anguilla bicolor* and other tropical species into East Asia for farming purposes increased significantly (Anon, 2014f), with the majority reportedly coming from the Philippines and Indonesia (Yoshinaga, 2013). Figure 18 shows the species composition of glass eels used for farming in mainland China, Japan, Korea and Taiwan between 2009 and 2014 according to data presented in the Japanese newspaper, *Nihon Yoshoku Shimibun*, in July 2014. These data assume that only *A. japonica* is farmed in Japan, *A. japonica*, *A. anguilla*, *A. rostrata* and *A. bicolor*/other tropical species (hereafter referred to as *A. bicolor +*) are farmed in mainland China and Korea, and *A. japonica* and *A. bicolor +* in Taiwan.

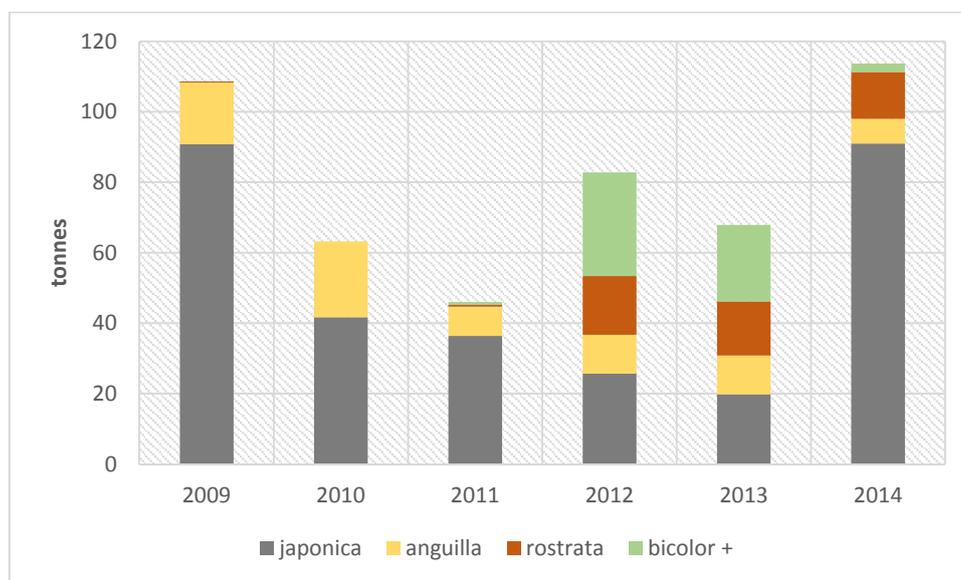


Figure 18 Species composition of glass eels used for farming in mainland China, Japan, Korea and Taiwan, 2009-2014. *Source: Nihon Yoshoku Shimibun*, 05 July 2014.

These data suggest that *A. bicolor+* was used in small quantities from 2011, and then in 2012 and 2013, nearly 30 and 22 tonnes respectively were used for farming, with these tropical species making up the largest proportion of the species used in these two years. These quantities are comparable (though slightly less) with those reportedly imported from the Philippines (see Figure 10). *Anguilla rostrata* also appeared to become increasingly important from 2012 onwards. The high quantities of *A. bicolor* corresponded with years of low availability of *A. japonica* – in 2014 quantities of *A. japonica* increased again and use of *A. bicolor+* consequently declined.

Farming of tropical eel species is being tested/is underway to varying degrees in mainland China, Japan, Korea and Taiwan. In 2012, several Japanese companies reported that farming *A. bicolor* was still very technically challenging: the best survival rate across ten companies trying to farm new *Anguilla* species (*A. rostrata*, *A. bicolor* and other tropical species) was 20%. The Shizuoka Eel Fisheries Cooperative Association reported an increase to 40% survival in 2013 for farming *A. bicolor* (Anon, 2013). In addition to difficulties with farming, selling these species can also be problematic when *A. japonica* becomes readily available, such as in 2014 (Anon, 2014d; T. Moriyama, Japan Eel Importers Association, *in litt.*, July 2014) and there have been concerns over parasites with serious human health implications being found in eels imported from the Philippines and Indonesia (Anon, 2011).

Glass eels of mixed species imported from the Philippines and Indonesia are generally farmed together as it is difficult to distinguish between the tropical *Anguilla* species at the glass eel stage, though morphological identification is reportedly possible with experience³³ (Anon, 2013). Further research into rapid glass eel identification through DNA testing (Asis *et al.*, 2014; H. Shiraishi, TRAFFIC, *in litt.*, August 2014) and

³³ <http://glasseelsdavid.pixnet.net/blog/post/75007214-%e8%8f%b2%e5%be%8b%e8%b3%93%e8%8b%97%e7%8e%bb%e7%92%83%e9%ab%94%e5%88%E2%80%A6>

determining which seasons result in higher proportions of certain species in catch (Aoyama, 2013; see discussion under monthly trade data for live eel fry) are ongoing. Yoshinaga (2013) carried out DNA analysis of over 80 different eel products found in fast food restaurants and supermarkets in Japan between 2011 and 2013 and only found one retailer selling *A. bicolor*, which was reportedly sourced from Indonesia. However, one company (Kaneka) is reportedly selling Philippine-sourced eels that have been farmed in Japan, with 50 tonnes having entered the market in 2013 (Anon, 2014g).

Furthermore, processed eel products derived from *A. bicolor* and *A. marmorata* glass eels imported from the Philippines and farmed in mainland China have entered the Japanese market – in 2013, 300 tonnes were imported (Anon, 2013). Mainland China reportedly attempted to export three times this quantity, however the remainder did not pass Japan's tests for chemical residues. Eel farms in mainland China use a number of chemicals which are not permitted on the Japanese market. Mori *et al.* (2013) identified the presence of malachite green, furazolidone, dicofol and endosulfan in eel products as the reasons for rejection of shipments coming from mainland China by the Japanese Ministry of Health, Labour and Welfare between 2006 and 2011. Many of the eels derived from the Philippines and grown out in mainland China are either consumed in China or exported to other markets such as Russia (T. Moriyama, Japan Eel Importers Association, *in litt.*, July 2014). *Anguilla bicolor* (market name: Black Eel) from the Philippines is also for sale in Taiwan and one Taiwanese fisheries products company specifically noted that there was high competition for Philippine glass eel shipments from Korean traders³⁴.

³⁴http://www.webdo.cc/cayenne_in/portal_c1_cnt_page.php?owner_num=c1_73119&button_num=c1&folder_id=10005&cnt_id=129802&search_field=&search_word=&search_field2=&search_word2=&search_field3=&search_word3=&bool1=&bool2=&search_type=1&up_page=1

Conclusions

Although there are discrepancies between datasets, in addition to a number of uncertainties related to the actual eel commodities in trade (species and life stages), the various data and information sources analysed for this report suggest that the Philippines became an increasingly important player in both the legal and illegal global eel markets from 2011 onwards, and in particular in 2012 and 2013.

According to global FAO capture data, in 2012 the Philippines was responsible for 8% of global *Anguilla* catch and according to exports reported to UN Comtrade, the Philippines exported 24% and 44% of the world's live *Anguilla* spp. in 2012 and 2013 respectively. The Philippines traded principally in live eels and the main destinations for these commodities were the four principal eel farming/consuming countries/territories in East Asia: mainland China, Japan, Korea and Taiwan, in addition to Hong Kong, which is a major trade hub for live eel. Total East Asian imports of both live eel fry (for farming purposes) and other live eel (for consumption) declined over the last decade, however the quantities sourced from the Philippines increased.

According to East Asian Customs data, in 2012 and 2013, the Philippines was the source of 29% of total East Asian live eel fry imports and 5.5% of other eel imports. Similar percentages for the Philippines' role in supplying live eel fry arose from analysis of advertisements for glass eels on the main global B2B trade platforms in July 2014 (30% of advertisements were from companies based in the Philippines) and also from East Asian farming data, which suggests that in 2012 and 2013, 35% and 32% of all live eel fry used in farms was *Anguilla bicolor* or other tropical species (sourced from the Philippines, and possibly other countries such as Indonesia). The small amount of 2014 data available at the time of writing this report suggest that imports of live eel fry from the Philippines at the start of 2014 were much lower than in the two previous years, however, due to much improved recruitment and a consequent abundant supply of *A. japonica* in East Asia.

Since May 2012, export of juvenile eels ≤ 15 cm from the Philippines has been banned. According to East Asian Customs data, live eel fry imports from the Philippines continued after May 2012, in 2013 and in early months of 2014. The exact size of live eel fry being imported into mainland China, Hong Kong and Japan is not defined in Customs codes, and therefore their imports could potentially include larger size juveniles over 15 cm, which are permitted for export. Traditionally, however, the smaller glass eels have been the "seed" of choice, and Taiwanese and Korean data which differentiates between the different sizes being imported, show that eels ≤ 15 cm continued to be imported after May 2012. Information collated from online advertisements, company websites, social media sites, blogs and seizures all support this. Intelligence collected during a Spanish enforcement operation 2011-2012, combined with UN Comtrade import data, also suggest that the Philippines was being used as a transit country for illegal eel trade of *A. anguilla* from the EU. Furthermore, large discrepancies between catch and trade datasets from local, national and international sources raise concerns over potential illegal and unreported fishing of eels in the Philippines.

Historically, Cagayan Valley has been the primary area of *Anguilla* fishing within the Philippines. However, comparisons of catch and trade data, online advertisements and further research suggest that other areas in the Philippines are becoming increasingly important, in particular Mindanao. In addition to catching glass eels for export, there appears to be a move to initiate farming, or at least the "growing out" of eels to sizes permitted for export (over 15 cm in length). The trade data also suggest that, in addition to the Philippines, many other countries have become increasingly important sources of live eel fry, including Canada, USA and the Dominican Republic in the Americas, Madagascar in Africa, and Viet Nam, Malaysia, Thailand and Indonesia in South-East Asia. In addition, Bangladesh, Indonesia and Myanmar are increasingly supplying other live eel to East Asia.

The information presented in this report clearly shows the ever-changing dynamics of eel trade and that if *A. japonica* recruitment in East Asian waters is low, other sources of *Anguilla* will be found (legally or illegally); and their availability/recruitment will in turn affect exploitation of other sources. Increased controls and management in certain source countries, such as EU Member States, Philippines, Indonesia and the Dominican Republic (all of which currently have export bans in place) and changes in consumption behaviour/demand are also affecting trade dynamics.

All these factors, together with other threats potentially affecting eels in the Philippines, such as pollution and habitat destruction, need to be considered when deciding on appropriate eel conservation and management measures in the Philippines. The recommendations presented below focus on eel conservation and management action related to pressures from over-harvesting, however it is important they are considered in light of other potential threats to eels. They are broken down into three main categories 1) data collection, monitoring and availability, 2) legislation and enforcement and 3) additional collaboration and consultation with stakeholders.

The majority of recommendations are aimed at Philippine authorities, including the national and regional offices of BFAR, BAS, BMB, Bureau of Customs and Local Government Units (LGUs), as it is being proposed that these organisations consider, initiate and lead these activities as part of the three-year Darwin project, in collaboration with ZSL and TRAFFIC. However, all recommended actions would benefit from the greatest national and third-country stakeholder and partner participation possible, including support from fishermen, trade associations, scientific and socio-economic researchers and non-governmental organizations. Furthermore, most of the recommended activities would benefit from longer-term planning, implementation and adaptive management, beyond the initial three year project.

Recommendations

Data collection, monitoring and availability

The national and regional offices of the Bureau of Fisheries and Aquatic Resources (BFAR), Bureau of Agricultural Statistics (BAS) and Local Government Units (LGUs) across the Philippines, are urged to:

- Assign clear responsibilities amongst the various authorities for reporting, monitoring and analysis of global, national and local datasets and resources available on eel catch and trade relevant to the Philippines, ensure this continues on a regular basis and make this information publically available.
- Investigate and address the reasons for the many data discrepancies identified throughout this report, including the large differences between Philippine eel catch data (local and national) and live eel export data (for 2012 and 2013 in particular), and between reported exports and imports of *Anguilla* to Taiwan; further research into the scale of the domestic market for *Anguilla* would also be warranted.
- Collect, record and make publically available catch data which as a minimum differentiate between *Anguilla* spp. and *Monopterus albus*, and the main life stages of *Anguilla* spp. It would also be important to consider the feasibility of reporting *Anguilla* catch to the species level, in particular the two main species *A. marmorata* and *A. bicolor*, and the newly described *A. luzonensis*.
- Collate details and develop an online register of farming or “growing out” facilities currently operating or being set up in the Philippines; and collect, record and make publically available farming data (as for catch).
- Improve accessibility of national Customs trade data and introduce specific Customs codes for different life stages of *Anguilla* and for *M. albus*. This should be carried out in consultation with the Philippines Bureau of Customs and other countries/territories, in particular Taiwan and Korea, which have already introduced these types of codes. Size and species categories should ideally be comparable across countries/territories – further research into sizes and weights of the various life stages of different *Anguilla* species would be of considerable use in developing appropriate conversion factors and guidelines for accurate reporting of trade.
- Participate in and/or organize training at the national and local levels to improve capacity for collecting and analysing catch, farming and trade data, throughout the supply chain in the Philippines.

Legislation and enforcement

The national and regional offices of BFAR, the Biodiversity Management Bureau (BMB) and LGUs across the Philippines, are encouraged to:

- Analyse the conservation, socio-economic, implementation and enforcement implications of current/potential management measures for eels at the international, national, regional and local levels. These include CITES listings, export bans, development of a traceability system for catch and trade in eels, restrictions on types of fishing gears used, national and local registers and/or permit systems for fishermen and farming operations, setting effort and catch limits and designating reserves.
- Develop complementary national, regional and local legislative instruments for eel conservation and management (based on the afore-mentioned analysis). Consultation and exchange of experiences between different regions in the Philippines is especially important for ensuring the creation of consistent and mutually supportive local ordinances by LGUs.
- Ensure any current or new management measures are implemented and enforced at the appropriate level, through clear assignation of roles and training of officials in issues such as national and local legislation, inspection procedures for farming operations and species identification.
- Make all national, regional and local legislative instruments for eel conservation and management publically available on a searchable online portal.

While Fisheries Administrative Order 242 (and corresponding export ban for juvenile eels $\leq 15\text{cm}$), the CITES listing of *A. anguilla* and eel export bans in other countries remain in force, it is recommended that relevant national and regional offices of BFAR, in collaboration with Philippine Bureau of Customs:

- Enhance national enforcement effort and capacity through sharing of information, training and establishing enforcement priorities/a risk assessment model for Philippine eel trade. This could be based initially on some of the information collated in this report (and inputted into the TRAFFIC database), such as main or newly important destinations (e.g. Hong Kong, Korea) and routes, months of highest known catch/trade and companies suggesting they are able to supply large quantities in their online advertisements.
- Co-operate and share intelligence and information on national legislation with consumer countries/territories, in particular with authorities in Hong Kong, mainland China, Korea, Japan and Taiwan, and with countries in Southeast Asia, such as Indonesia, Malaysia and Thailand, which may be used as transit points for illegal shipments. Opportunities for collaboration through the Association of Southeast Asian Nations' Wildlife Enforcement Network (ASEAN-WEN)³⁵ could be explored.
- Exchange experiences and collaborate with other *Anguilla* spp. range States in relation to implementation and enforcement of CITES provisions and national export bans, e.g. EU Member States, Indonesia and the Dominican Republic.

Additional collaboration and consultation with stakeholders

Demand from East Asian eel farming and consumer countries/territories is the cause of increased exploitation of tropical eels from the Philippines and therefore collaboration with consumer markets is essential. In addition, these countries/territories have considerable expertise and knowledge in relation to *Anguilla* spp. biology, species identification, farming potential and capacity, and market and consumer demand/preferences, in addition to participating in extensive ongoing research in these areas.

Philippine authorities and other stakeholders are therefore encouraged to:

- Contact fisheries authorities, trade and farming associations and researchers in East Asia, to raise awareness of concerns and the importance of improving traceability and legality of sourcing of eels from the Philippines. Discussions could possibly be initiated through the East Asia Eel Resource Consortium (EASEC)³⁶, which aims to bring together East Asian countries/territories to conserve shared eel resources and which has invited the Philippines, Indonesia, Malaysia and Viet Nam to previous meetings.
- Request support from East Asian experts with regard to developing in-house capacity in species identification and eel farming techniques.
- Collaborate and develop ongoing relationships with global B2B trade platforms such as Alibaba.com, including contacting these on a regular basis to request the removal of advertisements offering potentially illegally sourced eels.

³⁵ <http://www.asean-wen.org/>

³⁶ http://easec.info/EASEC_WEB/EASECdeclarationsFinal.pdf

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Annex

Table 3 Imports of “live eel fry” for farming (all sizes) into East Asia (mainland China, Hong Kong, Japan, Korea, Taiwan) by source, 2004-2013, kg. *Source:* East Asian Customs data: mainland China - requested from China Customs Information Centre; Hong Kong Trade Development Council http://bso.hktdc.com/bso/jsp/bso_home.jsp; Ministry of Finance, Trade Statistics of Japan http://www.customs.go.jp/toukei/info/index_e.htm; Korea International Trade Association <http://global.kita.net/>; Taiwan Bureau of Foreign Trade <http://cus93.trade.gov.tw/ENGLISH/FSCE/>.

Source	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Japan	39043	48790	60086	51907	28567	57875	23444	27355	5155	2110	344332
France	41468	51991	27939	41460	28045	6005	15413	0	0	0	212321
Hong Kong	4549	6871	19741	7111	24584	22142	25850	20204	14290	21103	166445
China	2456	3950	20196	386	44886	47125	40436	3054	672	2358	165519
Philippines	0	6168	1130	8563	13774	1993	3347	16379	34549	32388	118291
Taiwan	21677	34968	30657	11561	80	92	0	568	858	2227	102688
Canada	1675	6373	4891	1280	5420	6536	8146	13836	15033	18609	81799
USA	404	802	4498	3649	2319	1461	1367	5764	12188	26593	59045
Spain	5972	10436	6144	7664	6699	750	6585	1360	0	0	45610
UK	3239	5855	2008	1282	1282	0	553	0	0	200	14419
Viet Nam	0	0	0	0	0	0	0	0	0	13739	13739
Madagascar	0	262	40	0	403	1370	22	1797	3783	5562	13239
Morocco	0	0	0	0	0	837	3413	2612	1973	3093	11928
Malaysia	0	0	0	0	0	0	0	0	402	9354	9756
Korea	2805	187	1783	99	480	820	408	150	1042	0	7774
Denmark	1190	0	0	0	2997	1500	1500	0	0	0	7187
Greece	0	0	0	0	0	0	51	1846	3199	0	5096
Indonesia	0	90	0	0	182	87	868	636	1045	2008	4916
Thailand	0	0	0	0	0	0	0	0	498	3569	4067
Singapore	0	0	0	0	0	0	0	0	0	3304	3304
Germany	1125	0	0	256	150	0	0	0	0	0	1531
Australia	197	333	458	0	263	0	0	0	0	0	1251
Dominican Republic	0	0	0	0	0	0	0	0	351	875	1226
Cuba	0	0	0	0	0	0	0	0	264	628	892
Haiti	0	0	0	0	0	0	0	0	0	626	626
Belgium	0	0	0	0	0	0	0	600	0	0	600
Ireland	0	0	0	0	0	0	0	0	0	440	440
Romania	0	0	0	0	0	0	0	360	0	0	360
Netherlands	140	0	0	0	0	0	0	0	0	0	140
Central/South America	0	0	0	0	0	0	0	0	0	80	80
Korea DPR	0	0	23	0	0	0	0	0	0	0	23
Mauritius	0	0	0	0	0	0	0	22	0	0	22
Timor-Leste	0	0	0	0	0	0	0	0	0	10	10
South Africa	0	0	0	0	0	0	0	0	0	10	10
TOTAL	125940	177076	179594	135218	160131	148593	131403	96543	95302	148886	1398686
Total excl Hong Kong	121391	170205	159853	128107	135547	126451	105553	76339	81012	127783	1232241

Table 4 ab Total imports of “live eel fry” for farming (all sizes) into East Asia (mainland China, Hong Kong, Japan, Korea, Taiwan), for two time periods 2004-2010 and 2011-2013, by source, kg. *Source:* East Asian Customs data, as for Table 3. Excluding Hong Kong as “source” for imports. RoW – Rest of the World.

Source	2004-2010	Source	2011-2013
Japan	309712	Philippines	83316
France	212321	Canada	47478
China	159435	USA	44545
Taiwan	99035	Japan	34620
Spain	44250	Viet Nam	13739
Philippines	34975	Madagascar	11142
Canada	34321	Malaysia	9756
USA	14500	Morocco	7678
UK	14219	China	6084
Denmark	7187	Greece	5045
Korea	6582	Thailand	4067
Morocco	4250	Indonesia	3689
Madagascar	2097	Taiwan	3653
Germany	1531	Singapore	3304
Australia	1251	Spain	1360
Indonesia	1227	Dominican Republic	1226
RoW	214	Korea	1192
Total	947107	Cuba	892
		Haiti	626
		Belgium	600
		Ireland	440
		Romania	360
		UK	200
		RoW	122
		Total	285134

Table 5: Details of advertisements on B2B Trade Platforms in July 2014 for live glass eels/eel fry (juveniles) reportedly coming from the Philippines. *Source:* Alibaba <http://www.alibaba.com/>, EC21 <http://www.ec21.com/>, Food & Beverage (F&B) Online <http://www.21food.com/>, TradeKey <http://www.tradekey.com/> and Weiku <http://www.weiku.com/>. All advertisements refer to eels reportedly originating in the Philippines. Names of companies are as stated in the advertisements when accessed in July 2014.

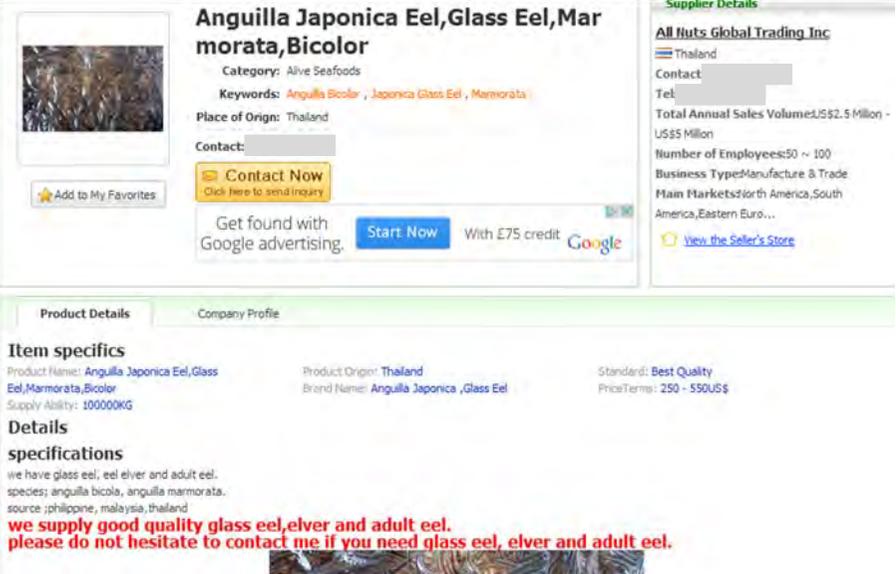
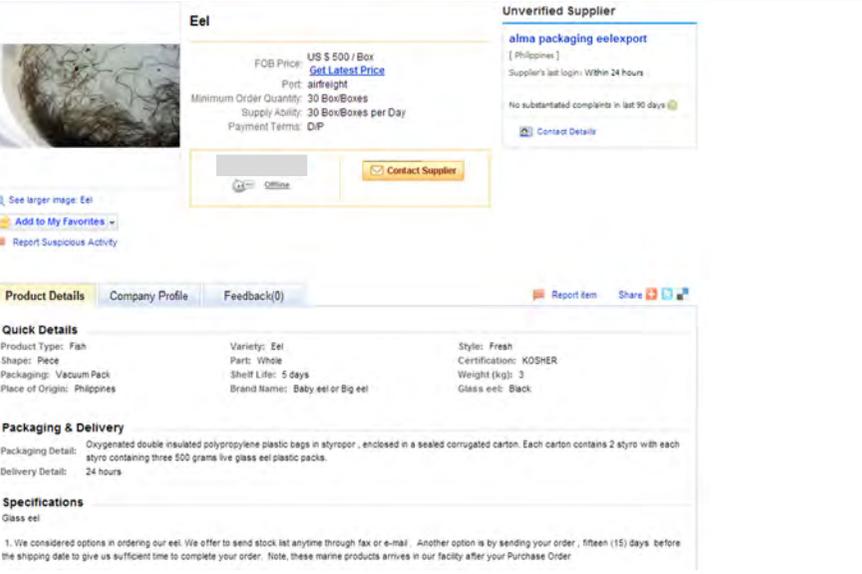
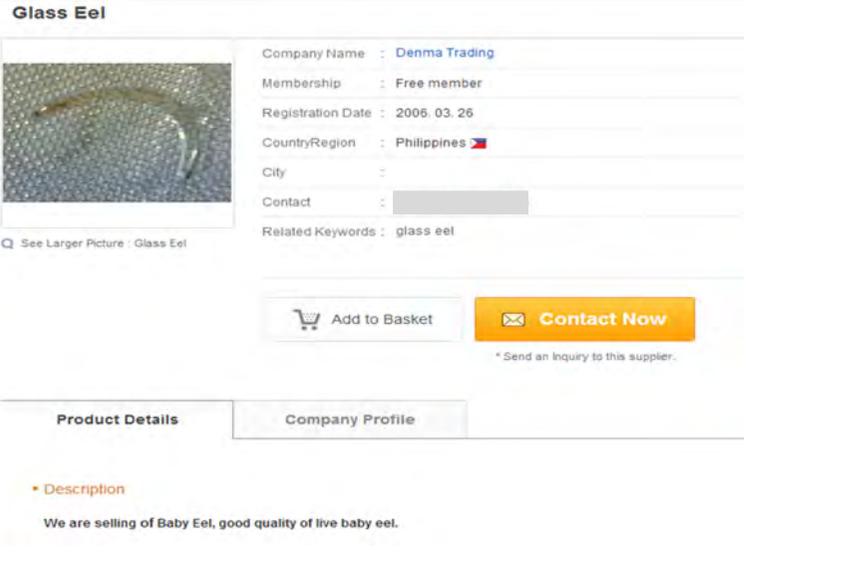
Company/ Location	B2B Platform and advertisement link (screen shot number, links to Table 6)	Species	Notes and information on product for sale (size, price, availability; if specified)
All Nuts Global Trading Inc Thailand	F&B http://www.21food.com/products/anguilla-japonica-eel-glass-eel,marmorata,bicolor-831177.html (s01)	<i>Anguilla bicolor, marmorata</i>	<ul style="list-style-type: none"> From Philippines, Thailand and Malaysia Supply all sizes (glass eels, elvers, adults)
Alma Packaging Export Philippines	Alibaba http://uk.alibaba.com/product/159103611-Eel.html (s02)	Black eel	<ul style="list-style-type: none"> Can supply 30 boxes per day USD 500 per box Packaging details: oxygenated double insulated polypropylene plastic bags in styropor, enclosed in a sealed corrugated carton. Carton contains 2 styropor, each styropor contains 3 x 500 g live glass eel bags
Babuyan Island Northern Phils Aqua Hatchery (Jester Trading) Philippines	Weiku http://www.weiku.com/products/3853975/Japanese_Eel_Fry.html (s03)	<i>Anguilla japonica, marmorata</i>	<ul style="list-style-type: none"> Collected from Babuyan Island Group in extreme northern Luzon, then shipped to nursery in northern Cagayan where rest for 7 - 30 days prior to transfer to Manila “Healthy well-rested baby Japanese eel located in Manila hatchery 4 miles from the airport available for inspection”. Availability: Glass eel, Oct to Feb with majority in late Nov to Dec, ~total seasonal catch >500 kg 0.3-0.5 g elvers, Nov to Mar, ~total seasonal catch >600 kg 0.6-1.0 g elvers, Nov to Mar, ~total seasonal catch >600 kg 2.0 -5.0 g elvers, Nov to Mar, ~total seasonal catch >1000 kg 6.0 -50 g, Nov to Mar and Jun-Jul, ~total seasonal catch >3000 kg
Denma Trading Eastern Samar, Philippines AND Kuon Trading Bulacan, Philippines	EC21 http://www.ec21.com/product-details/Glass-Eel--1467499.html (s04) F&B http://www.21food.com/showroom/734640/product/glass-eel.html (s05) Weiku http://www.weiku.com/products/3922294/Sell_Glass_Eel.html (s06)		<ul style="list-style-type: none"> Glass eel for aquaculture purposes
Dong Jin Trading Co. Ltd Korea	Alibaba http://uk.alibaba.com/product/151519951-live-eel.html (s07)	<i>Anguilla bicolor</i>	<ul style="list-style-type: none"> USD800-1400/kg Various sizes: 1,000-800, 800-600, 500-300, 200-100 pieces per kg
Dragon Eels Basilan, Philippines	EC21 http://www.ec21.com/product-details/Live-Eels--5026963.html TradeKey http://www.tradekey.com/product-free/Live-Eels-1625658.html (s08)	<i>Anguilla japonica</i>	<ul style="list-style-type: none"> Been dealing in eels for 14 years, including Korean, Chinese, Taiwanese and Japanese clients USD350/kg

Company/ Location	B2B Platform and advertisement link (screen shot number, links to Table 6)	Species	Notes and information on product for sale (size, price, availability; if specified)
East Asia Dragon Eels Catanduanes, Philippines	F&B http://www.21food.com/showroom/203375/productlist/list.html (s09) TradeKey http://www.tradekey.com/product-free/Eels-Live-Eel-Baby-Eels-Glass-Eels-5729481.html (s10)		<ul style="list-style-type: none"> • Serve clients from South East Asia, Korea, Hong Kong, Japan, China, Taiwan
Eels for Less Philippines	Alibaba http://uk.alibaba.com/product/138107537-live-baby-eels.html (s11)		<ul style="list-style-type: none"> • Also sell eel feed, “proven for Philippine and Southeast Asian eels”
Eico Marine Products Davao AND Metro Manila, Philippines	EC21 http://www.ec21.com/product-details/Live-Anguilla-Japonica-Glass-Eels--4347987.html (s12) F&B http://www.21food.com/showroom/63326/productlist/list.html (s13)	<i>Anguilla bicolor, tapika, japonica and marmorata</i>	<ul style="list-style-type: none"> • “Only eel farm in Philippines that cultivates/breeds 100% <i>Anguilla japonica</i> • Been dealing in glass/adult eels since 1998 • “<i>Anguilla tapika</i> is the newest replacement for hard to find <i>japonica</i>, same texture, same taste and lots of fats. Better than <i>mossambica</i>.”
ES Marine Trading Philippines	F&B http://www.21food.com/showroom/211585/productlist/list.html (s14)		<ul style="list-style-type: none"> • Glass and adult eels
EUNNAM KIM Sarangani, Mindanao, Philippines	Alibaba http://uk.alibaba.com/product/150960083-live-glass-eel-Anguilla-Bicolor-Pacifica.html (s15)	<i>Anguilla bicolor pacifica</i>	<ul style="list-style-type: none"> • USD 1000-1500/kg • Can supply 100 kg per week and cheaper than other companies, as trading directly with fishermen • ~5000-6000 eels per kg
Eve Eels Seafood Trading Company Metro Manila, Philippines AND J.J. Sport Chainat, Thailand	Alibaba http://uk.alibaba.com/product/151263495-Glass-Eel.html (s16 s17) http://uk.alibaba.com/product/170623601-Anguilla-Bicolor-and-Japonica-Glass-Eel.html (s18) EC21 http://www.ec21.com/product-details/Glass-Eel--8640112.html	Mix of <i>Anguilla marmorata</i> and <i>bicolor</i> (<i>bicolor</i> and <i>pacifica</i>) Specified that there was <u>no japonica</u> .	<ul style="list-style-type: none"> • 2 inches long • Can supply 500 kg - 1 tonne a month, have “stock rooms” in each catch area • USD 1000/kg • Have Japanese and Korean speaking employees to assist buyers • Supply local distributors in Manila
EXPORTVIN TERMELO ES (EXPORT TVIN KFT) Hungary	Alibaba http://uk.alibaba.com/product/168133896-Anguilla-Bicolor-and-Japonica-Glass-Eel.html (s19)	<i>Anguilla bicolor, japonica</i>	<ul style="list-style-type: none"> • Can supply 500-800 kg glass eel per month • Supply glass eels from other locations incl. Indonesia, Canada and Europe.
First Trader Metro Manila, Philippines	TradeKey http://www.tradekey.com/product-free/Glass-Eels-3230999.html (s20)	<i>Anguilla bicolor, pacifica, marmorata, japonica</i>	

Company/ Location	B2B Platform and advertisement link (screen shot number, links to Table 6)	Species	Notes and information on product for sale (size, price, availability; if specified)
Global Seafood SDN BHD Malaysia	Weiku http://www.weiku.com/products/15785346/live_eel_fish.html (s21)	<i>Anguilla bicolor, japonica, marmorata</i>	<ul style="list-style-type: none"> From Philippines and Malaysia 5000-6500 pieces per kg (5-6 cm) Supply all sizes (glass eels, elvers, adults), also eels from Bangladesh
Jiarellarn Sarangani, Mindanao, Philippines	EC21 http://www.ec21.com/product-details/Eel-Fry--8308292.html (s22)		<ul style="list-style-type: none"> Can supply 50-300kg per month
JSD Seafood Metro Manila, Philippines	EC21 http://www.ec21.com/product-details/Anguilla-Bicolor-and-Japonica-Glass--8335866.html (s23)	<i>Anguilla japonica, and bicolor (pacific)</i>	<ul style="list-style-type: none"> Can supply up to 800 kg per month Eels are quarantined in their nursery
KR Marine Products Corp Metro Manila, Philippines	Alibaba http://uk.alibaba.com/product/162846363-glass-eel.html EC21 http://www.ec21.com/product-details/Glass-Eel--8782823.html (s24)	Live <i>Anguilla bicolor (bicolor and pacifica) and marmorata</i>	<ul style="list-style-type: none"> Claim they can “export huge quantity of glass eel at discount price”
Live Glass Eel Metro Manila, Philippines	Weiku http://www.weiku.com/products/18738456/live_glass_eel.html (s25)		<ul style="list-style-type: none"> Packaging details: same as for Alma Packaging Export
Maruai Corporation Philippines	Alibaba http://uk.alibaba.com/product/159928489-EEL.html (s26)	Black Eel, A. <i>marmorata</i>	<ul style="list-style-type: none"> Selling Glass Eel, Black Eel and “Guruku”, and buying larger Marmorata 180~500 g per piece
Nooribio Jeollabuk-do Korea	Alibaba http://uk.alibaba.com/product/128279709-Live-glass-eel.html (s27)	<i>Anguilla bicolor, marmorata</i>	<ul style="list-style-type: none"> From Philippines and Malaysia Supply all sizes: Fry - less than 5cm Glass eel - 5~6 cm Fingerling - >7cm Elver – 7-30 cm Adult - 200g - 1 kg per piece
Northern Cagayan Aquatic Resources Metro Manila Philippines	F&B http://www.21food.com/showroom/734133/product/live-glass-eel.html (s28) EC21 http://www.ec21.com/product-details/Eel-Fry--6621579.html (s29)	<i>Anguilla japonica, bicolor and pacifica</i>	<ul style="list-style-type: none"> Been in eel fry trading business for 8 years Main headquarters in Aparri and Santa Ana, plus office in Manila “N. Cagayan has quality eel fry preferred by clients in Taiwan, China, Japan” Can supply 300-900 kg per week Packing: chilled oxygenated double plastic bag sealed in a styrofoam container. Each bag is 1 kg with ~ 6,000 eel fry.

Company/ Location	B2B Platform and advertisement link (screen shot number, links to Table 6)	Species	Notes and information on product for sale (size, price, availability; if specified)
Pacific Trade Zone Metro Manila Philippines	TradeKey http://www.tradekey.com/product-free/Glass-Eel-Unagi-japanese-Eel-907599.html (s30) Weiku http://www.weiku.com/products/3166139/glass_eel.html	<i>Anguilla japonica</i> , <i>marmorata</i>	<ul style="list-style-type: none"> • Can supply 300 kg per week • Season: <i>japonica</i> Nov- Feb, <i>marmorata</i> Aug-Apr (northern PH) • Export glass eel to Japan and Taiwan
Phiko company Philippines	TradeKey http://www.tradekey.com/product-free/Glass-Eel-7071355.html (s31)	<i>Anguilla bicolor</i> and <i>marmorata</i>	<ul style="list-style-type: none"> • Can supply 3 tonnes per month • Exported from Aparri, Cotabato, General Santos, Davao and Zamboanga cities. • Current price 1500 PHP/kg
Samuel Manda Live Glass Eels Metro Manila Philippines	TradeKey http://www.tradekey.com/product-free/Live-Glass-Eels-Anguilla-Bicolor--5315649.html (s32)	<i>Anguilla bicolor</i>	
Sein Trade Corporation AND A Pro-Woori International Corp Metro Manila Philippines AND Busan, Korea	EC21 http://www.ec21.com/product-details/Glass-Eel--3425434.html (s33) F&B http://www.21food.com/showroom/339953/product/fry-eel.html (s34) http://www.21food.com/showroom/665708/product/glass-eel.html http://www.21food.com/showroom/437500/product/glass-eel.html (s35) Weiku http://www.weiku.com/products/4992304/glass_eel.html http://www.weiku.com/products/3207340/GLASS_EEL.html Alibaba http://uk.alibaba.com/product/136216644-Glass-eel.html http://kr1014883076.fm.alibaba.com/product/135732401-0/glass_eel.html	<i>Anguilla japonica</i> , <i>marmorata</i> and <i>bicolor</i> mix	<ul style="list-style-type: none"> • 400~500g/bag 1kg/box 2.4kg/box • ~6000 pieces per kg • Can supply 700- 2000kg/month • Supply season Nov to Feb (Jun) • Ships to Hong Kong • Supply glass eels from many other countries incl. Indonesia, USA, Canada, Dominican Republic.
Shin Sheng International Development Taiwan	Alibaba http://uk.alibaba.com/product/115915706-Live-Marbled-eels-Anguilla-marmorata-live.html (s36) http://uk.alibaba.com/product/115916009-Live-Shortfin-eels-Anguilla-Bicolor-live.html (s37)	<i>Anguilla bicolor</i> , <i>marmorata</i>	<ul style="list-style-type: none"> • From Philippines and Indonesia • Glass eels 5-6 cm (plus larger sizes)

Table 6 Screen shots of advertisements on B2B Trade Platforms in July 2014 for live glass eels/eel fry (juveniles) reportedly coming from the Philippines. Images link to details provided in Table 5. *Source:* See Table 5.

1	 <p>Anguilla Japonica Eel, Glass Eel, Marmorata, Bicolor</p> <p>Category: Alive Seafoods</p> <p>Keywords: Anguilla Bicolor, Japonica Glass Eel, Marmorata</p> <p>Place of Origin: Thailand</p> <p>Contact: [Redacted]</p> <p>Contact Now Click here to send inquiry</p> <p>Get found with Google advertising. Start Now With E75 credit</p> <p>Supplier Details All Nuts Global Trading Inc Thailand Contact: [Redacted] Tel: [Redacted] Total Annual Sales Volume: US\$2.5 Million - US\$5 Million Number of Employees: 50 ~ 100 Business Type: Manufacture & Trade Main Markets: North America, South America, Eastern Euro...</p> <p>Product Details Company Profile Feedback(0)</p> <p>Item specifics Product Name: Anguilla Japonica Eel, Glass Eel, Marmorata, Bicolor Supply Ability: 100000KG Product Origin: Thailand Brand Name: Anguilla Japonica, Glass Eel Standard: Best Quality Price Terms: 250 - 550US\$</p> <p>Details specifications we have glass eel, eel elver and adult eel. species: anguilla bicolor, anguilla marmorata. source: philippine, malaysia, thailand</p> <p>we supply good quality glass eel, elver and adult eel. please do not hesitate to contact me if you need glass eel, elver and adult eel.</p>	2	 <p>Eel</p> <p>FOB Price: US\$ 500 / Box Get Latest Price Port: airfreight Minimum Order Quantity: 30 Box/Boxes Supply Ability: 30 Box/Boxes per Day Payment Terms: DIP</p> <p>Unverified Supplier alma packaging elexport [Philippine] Supplier's last login: Within 24 hours No substantiated complaints in last 90 days</p> <p>Product Details Company Profile Feedback(0)</p> <p>Quick Details Product Type: Fish Shape: Piece Packaging: Vacuum Pack Place of Origin: Philippines Variety: Eel Part: Whole Shelf Life: 5 days Brand Name: Baby eel or Big eel Style: Fresh Certification: KOSHER Weight (kg): 3 Glass eel: Black</p> <p>Packaging & Delivery Packaging Detail: Oxygenated double insulated polypropylene plastic bags in styrofoam, enclosed in a sealed corrugated carton. Each carton contains 2 styro with each styro containing three 500 grams live glass eel plastic packs. Delivery Detail: 24 hours</p> <p>Specifications Glass eel 1. We considered options in ordering our eel. We offer to send stock list anytime through fax or e-mail. Another option is by sending your order, fifteen (15) days before the shipping date to give us sufficient time to complete your order. Note, these marine products arrives in our facility after your Purchase Order</p>
3	<p>Healthy well-rested baby Japanese eel conveniently located in a Manila hatchery 4miles from the airport available for inspection Japanese EEL (Anguilla Japonica /marmorata) Source : Babuyan Island Group Extreme Northern Luzon Phils. 30 to 60 miles from Taiwan Nursery : Baby Eels caught in Babuyan Islands are ship to our nursery located in northern Cagayan Province where it can rest for 7 - 30 days prior to its transfer to our Manila Hatchery. This also replenishes baby eels sold by our much smaller 150 square meter Manila hatchery.</p> <p>Manila Nursery. A water recirculating system equipped with UV/ sterilization and Direct Oxygen injection system. Baby Eels/fry could be INSPECTED BEFORE CONSUMATING SALES. Baby eels could be inspected, chilled packaged and transported to the airport 4 miles away.</p> <p>Availability : Glass eel - Oct to Feb with the majority in late November to late dec. Average total seasonal catch -> 500 kg 0.3 - 0.5 gm elvers : Nov to March Ave. total seasonal catch ->600 kg 0.6 - 1.0 " Nov to March ">600 kg 2.0 - 5.0 Nov to March >1000 kg 6.0 - 50.0 gm Nov to March June-July >3000 kg</p> <p>Supplier - Babuyan Island Northern Phiis Aqua Hatcher Philippines Number of Employees: 5 - 10 People Business Type: Manufacturer, Trading Company Main Markets: Southeast Asia Credibility: ★★★★★</p>	4	 <p>Glass Eel</p> <p>Company Name : Denma Trading Membership : Free member Registration Date : 2006. 03. 26 Country/Region : Philippines City : Contact : [Redacted] Related Keywords : glass eel</p> <p>Add to Basket Contact Now * Send an inquiry to this supplier.</p> <p>Product Details Company Profile</p> <p>Description We are selling of Baby Eel, good quality of live baby eel.</p>

5

We supply live glass eel, we are expert for handling of live glass eel.

[Inquire Now](#)

Prev Product 1 2 3 4 Next Product

Contact Information

Company Name : **Denma Trading**

Address : [Redacted] Bulacan, Philippines

Zip : [Redacted]

Tel : [Redacted]

Mobile Phone : [Redacted]

Fax : [Redacted]

Contact Person (Sales Department) : [Redacted] [Inquire now](#)

6

We are a pioneer supplier of live Glass eel from our country.
We are a pioneer supplier of live Glass eel from the philippines. expert in handling of live baby eels.

Supplier - Koun Trading

Philippines

Number of Employees: 5 - 10 People

Business Type: Trading Company

Main Markets: Southeast Asia

Credibility: ★★★★★

[Redacted]

[Redacted]

7

live eel



FOB Price: US \$ 800 - 1,400 / Kilogram
 Port: [Get Latest Price](#)
 asia main port

Minimum Order Quantity: 50 Kilogram/Kilograms

Supply Ability: 500 Kilogram/Kilograms per Month
 L/C,D/A,D/P,T/T,Western Union,MoneyGram

Payment Terms: Union,MoneyGram

[See larger image](#) live eel

[Add to My Favorites](#)

[Report Suspicious Activity](#)

Unverified Supplier

dong jin trading co.,ltd
 [South Korea]
 Supplier's last login: 1 month(x) ago

No substantiated complaints in last 90 days

[Contact Details](#)

[Contact Supplier](#)

Offline

Product Details Company Profile Feedback(0) [Report item](#) [Share](#)

Quick Details

Product Type: Fish	Variety: Eel	Style: Alive
Shape: Piece	Part: Whole	Packaging: Vacuum Pack
Place of Origin: Philippines	Brand Name: good eel	

Specifications

anguilla bicolor
 size: 1,000-800/pc, 600-600/pc, 500-300/pc, 200-100/pc in kg
 origin: Philippines

8

Home > Products > Food & Beverage > Seafood > Other Seafood (2905)

Live Eels

FOB Price: [Get Latest Price](#)

[View Enlarge image](#)

[Contact now](#)

Supplier info

Dragon Eels
 [Philippines] [Rate this company](#)

This company is registered as a free member and is not verified or authenticated by TradeKey.com

[Contact Details](#) [Similar Products](#)

Ads by Google

Eels Eels Eels
[www.thogapark.co.uk/](#)
 Compare Prices & Start Saving Today. From 1000's Of Shops & Stores.

Popular Searches

[Live Eels Manufacturers](#) [Glass Eels Manufacturers](#)
[Adult Eels Manufacturers](#)

Product Details Company Profile [Report Suspicious Activity](#)

We supply good quality, and healthy eels at reasonable prices. We have been in this business for 14 years and we have dealt with Korean, Chinese, Taiwanese and Japanese clients.

9

East Asia Dragon Eels

Products

Select [Inquire Now](#) [Gallery](#) [List](#)

- 

Live Eels
Description: We sell Live Eels, Frozen Eels, Dried seahorse, Lobster, crab and all kind of seafood. We give competitive price.
- 

Glass Eel
Description: We sell Live eels, Frozen Eels, Dried seahorse, Lobster, crab and all kind of seafood. We give competitive price.
- 

Eels
Description: We supply Live Eels, Frozen eels, Dried seahorse, Lobster, crab and all other kind of seafood. We give out competitive price.
- 

Adult Eels
Description: We supply Live Eels, Frozen Eels, Dried Seahorse, Lobster, crab and all kind of seafood. We give out competitive price.
- 

Live Baby Eels
Description: We sell Live eels, Frozen Eels, Dried Seahorse, Lobster, crab and all kind of seafood. We give out competitive price.

10

Eels, Live Eel, Baby Eels, Glass Eels

FOB Price: [Get Latest Price](#)

[Dragon Eels](#) [Contact now](#)

[View Enlarge Image](#)

Supplier info

East Asia Dragon Eels
 (1) Request [Rate this company](#)
 This company is registered as a free member and is not verified or authenticated by TradeKey.com
[Contact Details](#) [Similar Products](#)

Ad by Google related to: eels, live eel, baby eels

Eels Eels Eels
[www.aliexpress.com](#)
 Compare Prices & Start Saving Today From 1000's Of Shops & Stores.

Popular Searches
[Eels Manufacturers](#) [Live Eels Manufacturers](#)
[Baby Eels Manufacturers](#) [Glass Eels Manufacturers](#)

[Report Suspicious Activity](#)

Product Details **Company Profile**

We sell eels, live eel, baby eels, glass eels. We can give volume. We serve clients from South East Asia, Korea, Hong Kong, Japan, China, Taiwan, also other places. We can sell at cheap price. We also have other seafood like lobster, crabs, prawns, shrimps etc. Please message us for more information. Thank you.

11

live baby eels

www.alibaba.com

FOB Price: [Get Latest Price](#)

[Offline](#) [Contact Supplier](#)

Unverified Supplier

Eels For Less
 [Philippines]
 No substantiated complaints in last 90 days
[Contact Details](#)

[See larger image: live baby eels](#)
[Add to My Favorites](#)
[Report Suspicious Activity](#)

Product Details **Company Profile** **Feedback(0)** [Report Item](#) [Share](#)

Quick Details
 Product Type: Food

Specifications
 live eels for sale
 live baby eels for sale, please see picture, what's in the picture is what we have, send us message thank you.
 eel feeds proven for philippine and south east asia eels cheap price, tried and tested with anguilla species.

*FASTER GROWTH AND WEIGHT GAIN
 *HIGH IMMUNE SYSTEM
 *BETTER MEAT AND FAT QUALITY
 *NO ANTIBIOTIC RESIDUE

AVAILABLE IN CAPSULE AND PRE MIX PACKAGING

12

Live Anguilla Japonica Glass Eels

[See Larger Picture: Live Anguilla Japonica Glass Eels](#)

Company Name: **Eico Marine Products**
 Membership: Free member
 Registration Date: 2010-01-23
 Country/Region: Philippines
 City: Davao
 Contact: [\[Redacted\]](#)

Related Keywords: Live, Eels, Healthy

[Add to Basket](#) [Contact Now](#) [Share to](#) [Facebook](#) [Twitter](#) [LinkedIn](#) [Pinterest](#) [StumbleUpon](#) [Delicious](#)

* Send an inquiry to this supplier

Product Details **Company Profile** [Report Item](#)

Description

We are the only EEL FARM in the Philippines that cultivate and breed 100% ANGUILLA JAPONICA EELS. We have been operating and dealing GLASS EELS and ADULT EELS since 1998. We also have other eel species available and also other seafoods. [\[Redacted\]](#) CHEAP PRICE

13

Eico Marine Products

Products

Select [Inquire Now](#) [Gallery](#) [List](#)

Bicolor/Japonica Eel Fillet
Description: Anguilla Japonica/ Anguilla Bicolor Fillet, IQF, Separated in 500g per plastic, NO CHEMICALS.. We accept volume order and small order... We give cheap price...

GLASS EEL LIVE
Description: LIVE GLASS EELS AND ADULT EELS; ANGUILLA BICOLOR, ANGUILLA TAPPIKA, ANGUILLA JAPONICA AND ANGUILLA MARMORATA.... ANGUILLA TAPPIKA IS THE NEWEST REPLACEMENT FOR HARD TO FIND ANGUILLA JAPONICA, SAME TEXTURE, SAME TASTE AND LOTS OF FATS. BETTER THAN ANGUILLA MOSSAMBICA. WE ALSO OFFER ALL KINDS OF ...

Live Adult Anguilla Japonica
Description: We are the only eel FARM in the Philippines that cultivate and breed 100% ANGUILLA JAPONICA EELS. We have been operating and dealing GLASS EELS and ADULT EELS since 1998. We also have other eel species available and also other seafoods. We have plenty of stocks this season. All types of ee...

Live Anguilla Japonica Glass Eels
Description: We are the only eel FARM in the Philippines that cultivate and breed 100% ANGUILLA JAPONICA EELS. We have been operating and dealing GLASS EELS and ADULT EELS since 1998. We also have other eel species available and also other seafoods. We have lots of stocks available this season. All types...

Live Glass Eels
Description: Live Glass Eels at CHEAP PRICES. Healthy and well rested. Low Mortality. We are the only eel FARM in the Philippines that cultivate and breed 100% ANGUILLA JAPONICA EELS. We have been operating and dealing GLASS EELS and ADULT EELS since 1998. We also have other eel species available and als...

14

Baby Eel
Description: We provide good quality products at cheap pricing, Daily harvest for guaranteed freshness. Message for more information.

Swamp Eels
Description: We provide good quality products at cheap pricing, Daily harvest for guaranteed freshness. Message for more information.

Glass Eels
Description: We provide good quality products at cheap pricing, Daily harvest for guaranteed freshness. Message for more information.

Live Eels
Description: We provide good quality products at cheap pricing, Daily harvest for guaranteed freshness. Message for more information.

Adult Eels
Description: We provide good quality products at cheap pricing, Daily harvest for guaranteed freshness. Message for more information.

15

live glass eel, Anguilla Bicolor Pacifica

Unverified Supplier

EUNNAM KIM
 [Philippines]
 Supplier's last login: Half a year ago
 No substantiated complaints in last 90 days
[Contact Details](#)

FOB Price: US \$ 1,000 - 1,500 / Kilogram
[Get Latest Price](#)
 Port: Philippines General Santos
 Minimum Order Quantity: 30 Kilogram/Kilograms
 Supply Ability: 100 Kilogram/Kilograms per Week
 Payment Terms: T/T

[Offline](#) [Contact Supplier](#)

[See larger image: live glass eel, Anguilla Bicolor Pacifica](#)
[Add to My Favorites](#)
[Report Suspicious Activity](#)

Product Details Company Profile Feedback(0) [Report Item](#) [Share](#)

Quick Details
 Product Type: Fish Variety: Eel Style: Alive
 Shape: Piece Part: Whole Packaging: Bulk
 Place of Origin: Philippines

Specifications
 There are about 5000-6000 pieces of live glass eel per kilogram.
 We are staying in Philippines Mindanao General Santos to sell live glass eel. We can supply cheaper than other company, because we are direct trading with fisherman.
 There are about 5000-6000 pieces of eel per kilogram.
 If you are interested in our product(glass eel), don't hesitate to contact with us.

16

Glass Eel

Unverified Supplier

Eve Eels
 [Philippines]
 Supplier's last login: Half a year ago
 No substantiated complaints in last 90 days
[Contact Details](#)

FOB Price: US \$ 800 - 1,100 / Kilogram
[Get Latest Price](#)
 Minimum Order Quantity: 50 Kilogram/Kilograms

[Offline](#) [Contact Supplier](#)

[See larger image: Glass Eel](#)
[Add to My Favorites](#)
[Report Suspicious Activity](#)

Product Details Company Profile Feedback(0) [Report Item](#) [Share](#)

Quick Details
 Product Type: Fish Variety: Eel Style: Alive
 Packaging: Vacuum Pack

Specifications
 Eve Eels export eel, baby eel, black eel, lowest price in the Philippines
 EVE EELS from Philippines we supply even local distributors in the Philippines we can assure that we supply at the lowest price.
 EVE EELS Seafood Trading Company Since 2011 Contact us for quotation

17

1. BLACK ADULT EELS
 Freight cost depends on no. of boxes and required list of docs. **WEIGHT RANGE:** we have various weight range from 200g up to 1000g (20cm-70cm) Please email us the size that you need. Currently we supply more than 2 tons per month to our clients in total

2. BABY EELS

Anguilla marmorata/anguilla bicolor/anguilla bicolor bicolor/anguillar bicolor pacifica mix
 No JAPONICA in the Philippines . 2inch long . We can supply up to 1 ton a month. .
 We have stock rooms in each catch area.
 We only supply new and fresh eels. .
 We keep mortality rate below 10%

We operate with no mistake, delays and we response fast to your inquiries and requests.
 We promise you 100% satisfaction with our products and services.

most importantly : we supply at the lowest price. we even supply most of the local distributors in the Philippines.

we have Japanese and Korean speaking employee who can assist you.

18

Anguilla Bicolor and Japonica Glass Eel

FOB Price: EUR 500 - 750 / Kilogram
[Get Latest Price](#)
 Port: KOPER PORT
 Minimum Order Quantity: 50 Kilogram/Kilograms
 Supply Ability: 500 Kilogram/Kilograms per Month
 Payment Terms: T/T

Verified Supplier
EXPORTVIN TERMELO ES (EXPORT TVIN KFT)
 [Hungary]
 Supplier's last login: Within 24 hours
 No substantiated complaints in last 90 days
[Contact Details](#)

[See larger image: Anguilla Bicolor and Japonica Glass Eel](#)
[Add to My Favorites](#)
[Report Suspicious Activity](#)

Product Details Company Profile Feedback(0) Report Item Share

Quick Details
 Product Type: Fish Variety: Eel Style: Alive
 Packaging: Vacuum Pack Place of Origin: Chiang Rai Thailand

Specifications
 Anguilla Bicolor and Japonica Glass Eel

Our company supplies Anguilla Bicolor and Japonica Glass Eel. They are gathered from the river systems of the Philippines. Once they are harvested, eels are quarantined to eliminate unwanted parasites. They are kept in our nursery where the water is properly purified and aerated. Diet consists of dried fish pellets, dried bloodworms and dried shrimp. We can supply up to 800kg of high quality glass eel per month.

19

Anguilla Bicolor and Japonica Glass Eel

FOB Price: US \$ 250 - 260 / Kilogram
[Get Latest Price](#)
 Minimum Order Quantity: 10 Kilogram/Kilograms
 Supply Ability: 2000 Kilogram/Kilograms per Month
 Payment Terms: T/T,MoneyGram

Unverified Supplier
j.j sport
 [Thailand]
 Supplier's last login: 1 month(s) ago
 No substantiated complaints in last 90 days
[Contact Details](#)

[See larger image: Anguilla Bicolor and Japonica Glass Eel](#)
[Add to My Favorites](#)
[Report Suspicious Activity](#)

Product Details Company Profile Feedback(0) Report Item Share

Quick Details
 Product Type: Fish Variety: Eel Style: Alive
 Packaging: Vacuum Pack Place of Origin: Chiang Rai Thailand

Specifications
 EVE EELS
 from Philippines

20

Glass Eels

FOB Price: (Negotiable) [Get Latest Price](#)
 Minimum Order Quantity: 5 Kilogram
 Payment Type: Other

Supplier Info
First Trading [Philippines] Rate this company
 This company is registered as a free member and is not verified or authenticated by TradeKey.com.
[Contact Details](#) [Send Products](#)
 Ad by Google related to: glass, eels
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 www.asa.com/Eel-Prices-UK
 Search Eel Prices UK Find Results on Asa.com!

Popular Searches
[Glasses Manufacturers](#) [Eels Manufacturers](#)

Product Details Company Profile **Product Specifications** Report Suspicious Activity

Brand Name: Glass Eels
 Anguilla Eels of sub species Bicolor, Bicolor Pacifica, Marmorata, Japonica

21

Supplier - GLOBAL SEAFOOD SDN BHD

Malaysia

Credibility: ★★ ★

Specifications

We have glass eel, eel elver and adult eel.
 Species: *anguilla bicolor*, *japonica* and *marmorata*.
 Source :Philippine, Malaysia.
 Size : 5000 to 6500 pieces per 1 kg(glass eel)
 glass eel ; 5~6 cm
 eel elver ; 7~30 cm
 adult eel ;200g~1 kg/pcs.
 We supply good quality glass eel,elver and adult eel.
 Please do not hesitate to contact us for details
 We are supplier of Live eel fish from Bangladesh with supply capacity of One Metric Ton per day.
 Product: Live EL Fish

Packing : StyrofoamBox 25 kg per box

Turn around time:Two days from order. Quantity: 1 Mt per day.

Price: Negotiable Minium Order: 300 Kg

Price List and Grading:
 Weight in Gms
 Product price Per Kg in USD.
 200 & Plus
 6.00 –7.00
 MIX 50 & above
 4.50 – 6.00

22

Eel Fry

Company Name : Jarellam
 Membership : Free member
 Registration Date : 2013. 07. 17
 Country/Region : Philippines
 City : Sarangani Province
 Contact : [Redacted]
 Related Keywords : eel fry, marmorata

Add to Basket **Contact Now**

Product Details Company Profile Report Item

Place of Origin: Philippines

Description

Good day Sir, Ma'am. We can provide what you need. We can supply 50-300kg of eel fry monthly. Our location is in Sarangani Province Philippines. We are looking for serious buyer of our eel fry. If your interested don't hesitate to email me at [Redacted] attached also a sample picture of our eel fry.

23

Anguilla Bicolor and Japonica Glass Eel

Company Name : JSD Seafood
 Membership : Free member
 Registration Date : 2013. 07. 26
 Country/Region : Philippines
 City : Manila
 Contact : Jeffrey San Diego (Mr.)
 Related Keywords : live, glass, elvers, fry, eel, anguilla, pacifica, bicolor, japonica, fingerling

Add to Basket **Contact Now**

Product Details Company Profile Report Item

Place of Origin: Philippines

Description

Our company supplies Anguilla Bicolor and Japonica Glass Eel. They are gathered from the river systems of the Philippines. Once they are harvested, eels are quarantined to eliminate unwanted parasites. They are kept in our nursery where the water is properly purified and aerated. Diet consists of dried fish pellets, dried bloodworms and dried shrimp. We can supply up to 800kg of high quality glass eel per month.

24

Glass Eel

Company Name : KR Marine Products Corp
 Membership : Free member
 Registration Date : 2014. 02. 28
 Country/Region : Philippines
 City : paranaque city
 Contact : [Redacted]
 Related Keywords : glass eel

Add to Basket **Contact Now**

Product Details Company Profile Report Item

Place of Origin: Philippines

Description

we sell, philippines eel, baby eel, live glass eel, elvers, bicolor pacifica, bicolor bicolor, anguilla marmorata.

25

Oxygenated double insulated polypropylene plastic bags in styropor, enclosed in a sealed corrugated carton. Each carton contains 2 styro with each styro containing three 500 grams live glass eel plastic packs.

Baby eel

Supplier - live glass eel

 Philippines

Total Annual Sales Volume:US\$1 Million - US\$2.5 Million

Number of Employees:5 - 10 People

Business Type:Trading Company

Main Markets:North America,South America,Southeast Asia,East

Credibility:★★★★



27



Live glass eel

FOB Price: [Get Latest Price](#)

Minimum Order Quantity: 10 Kilogram/Kilograms

Supply Ability: 100 Kilogram/Kilograms per Week

Payment Terms: T/T

 Offline [Contact Supplier](#)

[See larger image: Live glass eel](#)

[Add to My Favorites](#)

[Report Suspicious Activity](#)

Unverified Supplier

nooribio

[South Korea]

Supplier's last login: 4 month(s) ago

No substantiated complaints in last 90 days

[Contact Details](#)

Product Details Company Profile Feedback(0) [Report item](#) [Share](#)

Quick Details

Product Type: Fish	Variety: Eel	Style: Alive
Shape: Piece	Packaging: Vacuum Pack	Place of Origin: Philippines
Brand Name: Anguilla bicola	Type: glass eel	

Packaging & Delivery

Packaging Detail: Chilled oxygenated double polythene plastic bag in sealed styrofoam container with ice.

Delivery Detail: upon the order within one week.

Specifications

We have glass eel, eel elver and adult eel.

Species: anguilla bicola, anguilla marmorata.

Source: Philippine, Malaysia.

Size : 5000 to 6500 pieces per 1 kg(glass eel)

- fry :less than 5cm
- glass eel : 5-6 cm
- fingerling:more than 7cm
- eel elver : 7-30 cm
- adult eel :200g~1 kg/pcs.

26

EEL

FOB Price: [Get Latest Price](#)

 Offline [Contact Supplier](#)

[Add to My Favorites](#)

[Report Suspicious Activity](#)

Unverified Supplier

Marui Corporation

[Philippines]

Supplier's last login: 5 month(s) ago

No substantiated complaints in last 90 days

[Contact Details](#)

Product Details Company Profile Feedback(0) [Report item](#) [Share](#)

Quick Details

Product Type: Fish	Variety: Eel	Style: Alive
Shape: Piece	Part: Whole	Packaging: Vacuum Pack
Model Number: 09176015912		

Specifications

We sell Black Eel, Glass Eel, and Gurusu

We buy Marmorata 2-5 pc per kilo, 100-500 g per pc

28

Northern Cagayan Aquatic Resources

live glass eel [Inquire Now](#)



[See larger image](#)

Product Name: live glass eel

Product Origin: Northern Cagayan, Philippines

Description:

We have been in the eel fry trading business for eight years now. Because of the ever increasing demand on eel fry, in addition to our main headquarters in Aparri and Sta Ana in Cagayan, we have set up an additional office in Manila, Philippines to expand our reach to interested buyers.

- Species: Anguilla Japonica, Pacifica and Bicolor
- Origin: Northern Cagayan, Philippines.

29 We have been in the eel fry trading business for eight years now. Because of the ever increasing demand on eel fry, in addition to our main headquarters in Aparri and Sta Ana in Cagayan, we have set up an additional office in Manila, Philippines to expand our reach to interested buyers.

The Northern Cagayan Valley is home to quality fries. The batch of eel fry harvested in Northern Cagayan is particularly preferred by clients from Taiwan, China and Japan with whom we have shared long ties since the business has been established.

Below are more information about us and our product.

1. Species: Anguilla Japonica, Pacifica and Bicolor
2. Origin: Northern Cagayan, Philippines.

The Northern Cagayan Valley is home to quality fries. The batch of eel fry harvested in Northern Cagayan is particularly preferred by clients from Taiwan, China and Japan with whom we have shared long ties since the business has been established.

3. Supply Time and Amount: 300 to 900 kilograms / week
4. Packing: chilled oxygenated double plastic bag sealed in a styrofoam container. Temperature is consistently monitored and well maintained at 16 to 17 degree celsius. Each bag is weighed at 1 kilogram containing approximately 6,000 pieces of healthy eel fry.

Glass Eel

FOB Price: 35 - 100 / Kilogram (Negotiable) [Get Latest Price](#)

Minimum Order Quantity: 50 Kilogram

Supplying Ability: 3 Ton / Month

Payment Type: Other

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Product Details [Report Suspicious Activity](#)

Product Specifications

Product Type: glass eel Style: Live eel Packaging: Shro Processing Type: Floured

Glass eel exported from Aparri, Cotabato City, General Santos City, Davao City, Zamboanga City, Philippines. Current price: 1,500.00Php per Kilogram. Also selling 200grams and above Bicolor and Marmorata, maximum supply monthly would be 3 tons, minimum order would be 50kilos. message me for orders.

33 We are supply glass eel from the philippines as following:

1. Item: glass eel
2. Scientific name: Anguilla japonica / Anguilla bicolor / Anguilla marmorata mixed
3. Packaging: 400-500g/bag trixbox 2.4trixbox
4. QTY supply: 1000-2000kg/month
5. Supply season: Nov - May
6. Shipment: CNF Hong Kong or FOB Manila
7. Quality control: One's arrive from the field to our water tank and control the water temperature with rest glass eel with in 3-4days before shipment.
8. Payment: FOB will upon inspection CNF Hong Kong will upon arrive in hong kong inspection.
9. Eel mortality: 5%-7% below
10. Guarantee modality: Up to 7% will deduct from payment

PROCEDURE:

1. From the buyer send PO final confirmation with seller
2. Seller will sample for inspect preparations.
3. Upon inspect the sample will contact eachother
4. Buyer will deposit 30% for guarantee purchase
5. QTY
6. Shipment

If you have any inquiry pls contact this aprojacat@hotmail.com dal lr and 6328979519 looking for jack kim

Product image

Glass Eel-Unagi-japanese Eel

FOB Price: [Get Latest Price](#)

Place of Origin: Philippines

Minimum Order Quantity: 5 kilograms

Supplying Ability: 1,000-2000 kilograms

[View Enlarge Image](#)

Product Details [Company Profile](#)

Supplier Info

Pacific Tradezone, Co. (Philippines) [Rate this company](#)

This company is registered as a free member and is not verified or authenticated by TradeKey.com

[Contact Details](#) [Seller Products](#)

Ad by Google related to glass eel, eel, unagi

Unagi Eel up to 70% off
www.mtsales.com/unagiEel
Now or never: Unagi Eel sale! Hurry while stocks last!

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We are exportor Seller " JAPANESE EEL - (Unagi) - GLASS EEL / Live baby eel, eel ever <- FEATURES & CHARACTERISTICS >> -Glass eel, Eel Ever - Anguilla Japonica (Marmorata) -Source: Northern Philippines, near southern Taiwan -Packaging: Chilled oxygenated double layer coethene plastic in sealed styrofoam container -availability: Glass EEL - October to March -Supply ability: 300 kilograms a year -Price: Negotiable -We export high quality and natural live glass eels from the Philippines. We have expertise packaging of live glass eels / eel ever for shipment -Glass eel ever could be inspected before consummating sales. -Live glass eels Sample can be provided as per arrangement with a cost fee We Exported Glass eel to Japan and Taiwan

Live Glass Eels (Anguilla Bicolor)

FOB Price: [Negotiable](#) [Get Latest Price](#)

Place of Origin: Philippines

Payment Type: Other (Western Union)

[View Enlarge Image](#)

Product Details [Company Profile](#)

Supplier Info

Samuel Manda Live Glass Eels (Philippines) [Rate this company](#)

This company is registered as a free member and is not verified or authenticated by TradeKey.com

[Contact Details](#) [Seller Products](#)

Fresh / Frozen Salmon
Superior Grade Wild Salmon, Fresh & Stead - Direct Delivery
www.kingfish.com

[Report Suspicious Activity](#)

Product Specifications

Variety: Eel Style: Fresh Parc: Whole Packaging: Oxygenated double insulated polystyrene plastic bags

The Eels Prices Are Negotiable. Transactions can be made by calling my number or you can just email me. Phone : [REDACTED]

Live Glass Eel

Product Name: Fry eel

Product Origin: Philippines

Brand Name: Fry eel

Supply Ability: 100 Kilogram (per Week)

Description:

We have great eel from philippines and there had need.

Dear Madam / Sir

We can supply Fry eel(glass eel) from hong kong every week.

And monthly supply volume is 200kg ton to 700kg ton volume

Product Type: Other Model Number: 350001 Full Part: Fry eel

Live: Fry eel Place of Origin: Philippines Brand Name: Fry eel

Trade: glass eel Processing: Live

[Inquire Now](#)

Prev Product 1 2 3 Next Product

Contact Information

Company Name: **seabrook corp**

Address: **MANAGATY**
MANAGATY CITY, N. M. Philippines

Zip: [REDACTED]

City: [REDACTED]

Mobile Phone: [REDACTED]

Fax: [REDACTED]

Website: [REDACTED]

Contact Person: [REDACTED]

35

A-Pro Woori International Corp

glass eel

[Inquire Now](#)



[See larger image](#)

Model No.: SE001
 Product Name: glass eel
 Product Origin: Philippines
 Brand Name: SEFI
 Supply Ability: 300 Kilogram/Kilograms per Quarter
 Description:

Glass eel:
 Anguilla japonica / Anguilla bicolor / Anguilla marmorata

Dear Madam & Sir

We are export glass eel from the philippines and Description of Goods is follow:

1.Item : Glass eel

2.Scientific name : Anguilla japonica / Anguilla bicolor / Anguilla Marmorata

36



Live Marbled eels - Anguilla marmorata (live glass eels and adult)

FOB Price: [Get Latest Price](#)
 Payment Terms: L/C,T/T

[Offline](#) [Contact Supplier](#)

[See larger image](#) Live Marbled eels - Anguilla marmorata (live glass eels and adult)

[Add to My Favorites](#)
[Report Suspicious Activity](#)

Unverified Supplier

Shin Sheng International Development

[Taiwan]
 Supplier's last login: Within 24 hours
 Response Rate: **75.0%** of buyers responded to within 3 days

Recent Buyer Interactions **vs** Industry
 Response Effectiveness **Avg**
 No substantiated complaints in last 90 days

[Contact Details](#)

Product Details Company Profile Feedback(0)

Quick Details

Product Type: Fish Variety: Eel Style: Alive,Glass eels
 Place of Origin: Indonesia

Specifications

Marbled eels (Anguilla marmorata) Glass Eels and adult

We offer live Marbled eels (Anguilla marmorata) Glass Eels Size 5-6cm long and Adult eels 100 grams - 6 kg / pcs from reliable sources in North Indonesia and Philippines. Our collector has been involved in the eels business for a long time now. Please don't hesitate to contact us if you need live Marbled eel (Anguilla marmorata).

37

Live Shortfin eels - Anguilla bicolor (live glass eels, elver and adult)

FOB Price: [Get Latest Price](#)
 Payment Terms: L/C,T/T

[Offline](#) [Contact Supplier](#)



[See larger image](#) Live Shortfin eels - Anguilla bicolor (live glass eels, elver and adult)

[Add to My Favorites](#)
[Report Suspicious Activity](#)

Unverified Supplier

Shin Sheng International Development

[Taiwan]
 Supplier's last login: Within 24 hours
 Response Rate: **75.0%** of buyers responded to within 3 days

Recent Buyer Interactions **vs** Industry
 Response Effectiveness **Avg**
 No substantiated complaints in last 90 days

[Contact Details](#)

Product Details Company Profile Feedback(0)

Quick Details

Product Type: Fish Variety: Eel Style: Alive,Glass eels
 Place of Origin: Indonesia

Specifications

Shortfin eels (Anguilla bicolor) Glass Eels, elver and adult.

We offer live Shortfin eel (Anguilla bicolor) Glass Eels Size 5-6cm long, elver 15-35cm and adult 200g-1kg from reliable sources in West and South Indonesia and Philippines. Our collector has been involved in the eels business for a long time now. Please don't hesitate to contact us if you need live Shortfin eels (Anguilla bicolor).

Table 7 Imports of “other live eel” into East Asia (mainland China, Hong Kong, Japan, Korea, Taiwan) by source, 2004-2013, tonnes. *Source: East Asian Customs data, as for Table 3. RoW – Rest of the World*

Source	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
China	14189	13312	13494	10157	14445	8688	10130	5802	3847	5221	99286
Taiwan	17547	11890	8986	13193	6525	5392	8976	4843	1374	868	79596
Indonesia	795	1171	634	923	936	962	1068	99	1325	655	8570
Bangladesh	152	213	621	573	410	140	34	11	11	166	2330
Australia	126	79	115	126	146	70	89	206	276	194	1428
Philippines	17	37	34	36	25	55	167	168	411	437	1386
Thailand	65	112	122	173	167	160	165	221	18	5	1208
New Zealand	54	36	32	33	31	26	29	88	141	138	608
India	0	0	0	15	53	7	354	0	0	0	430
Canada	39	24	40	35	57	26	21	29	19	46	336
Myanmar	3	23	30	29	27	24	20	18	27	31	231
Korea	8	0	2	4	2	4	11	29	75	1	136
France	0	0	0	0	0	0	0	0	27	99	126
USA	0	2	1	1	2	0	9	42	27	29	111
Japan	3	14	31	8	3	1	3	27	14	8	111
Tunisia	0	0	0	0	0	0	0	0	8	50	57
Madagascar	0	0	0	0	0	0	1	9	6	26	42
RoW	13	21	7	3	4	1	9	10	20	7	95
TOTAL	33011	26935	24150	25309	22832	15555	21086	11601	7625	7981	196085

Table 8 Live eel trade from the Philippines to East Asia according to two different data sources, 2004-2013, tonnes. *Sources: Exports from the Philippines to mainland China, Hong Kong, Japan, Korea and Taiwan according to export data reported in UN Comtrade and imports from the Philippines according to East Asian Customs data.*

Exports from the Philippines (UN Comtrade)											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
China	50	58	143	272	218	232	368	967	3191	8185	13683
Hong Kong	10	37	16	44	68	19	70	310	799	1394	2766
Japan	0	1	0	1	0	0	0	0	0	5	7
Korea	1	0	0	0	1	0	0	3	7	0	12
Taiwan	4	13	7	7	16	1	4	151	1121	1812	3136
Total	65	108	166	324	302	252	442	1431	5118	11397	19604
Imports from the Philippines (Asian Customs)											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
China	16	35	30	30	22	30	48	32	29	20	293
Hong Kong	1	8	4	13	14	27	122	149	409	435	1181
Japan	0	0	0	0	0	0	0	0	0	2	3
Korea	0	0	0	0	1	0	0	2	6	11	21
Taiwan	0	0	1	1	1	0	0	1	1	1	6
Total	17	43	35	44	39	57	170	184	446	470	1505

TRAFFIC, the wildlife trade monitoring network, is the leading non-governmental organization working globally on trade in wild animals and plants in the context of both biodiversity conservation and sustainable development.

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