

Junkyard Planet: It's Still Here.

Adam Minter



Scrap Metal Reporter Photographed in his Natural Habitat (before marriage and kids).

















900

CAUTION
DO NOT PLAY
OR AROUND

NOTICE
PRIVATE CONTAINER
NO DUMPING

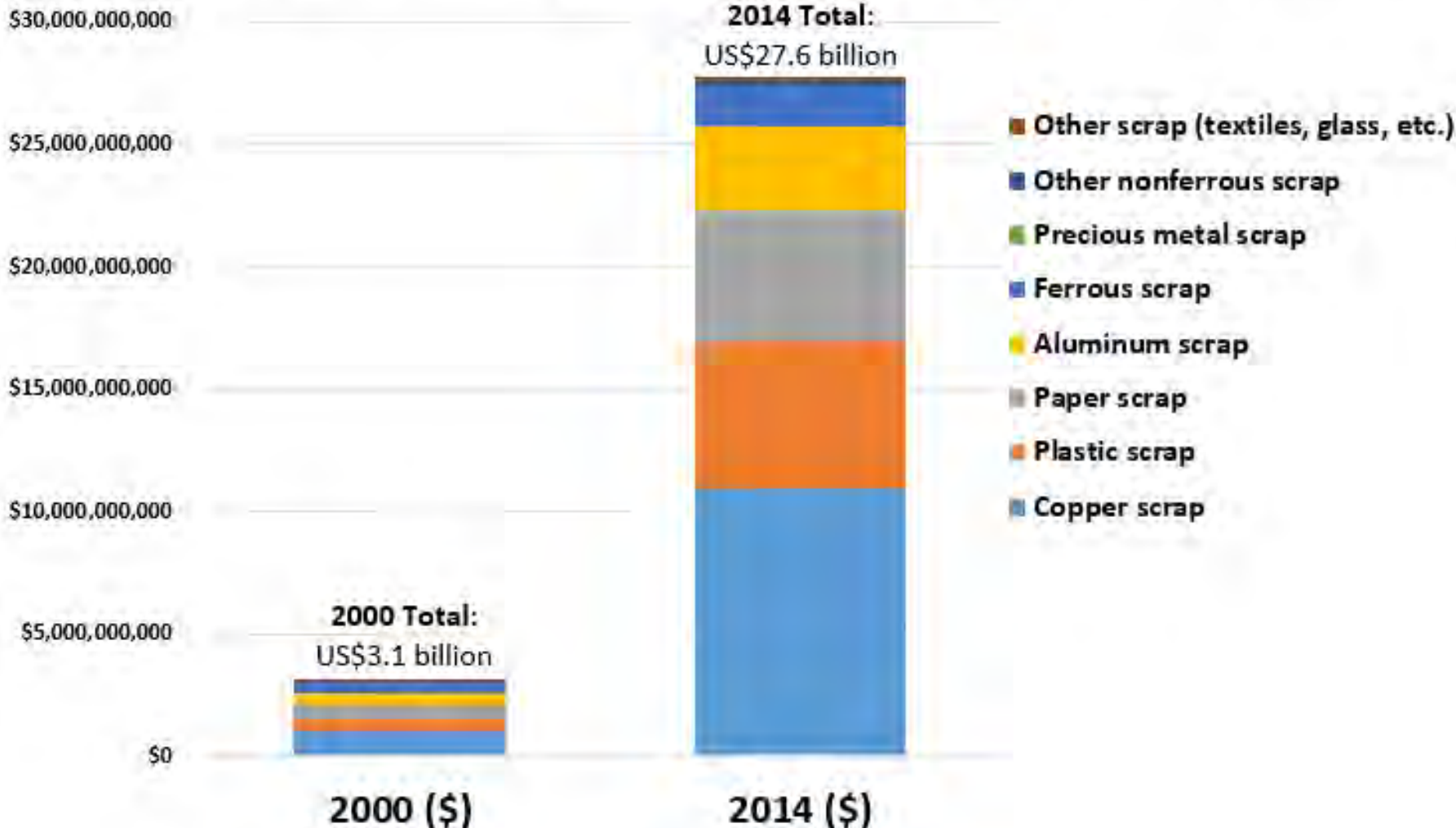
NOTICE
CONTAINER TO BE REPLACED
ON HARD LEVEL SURFACE
LOAD UNIFORMLY





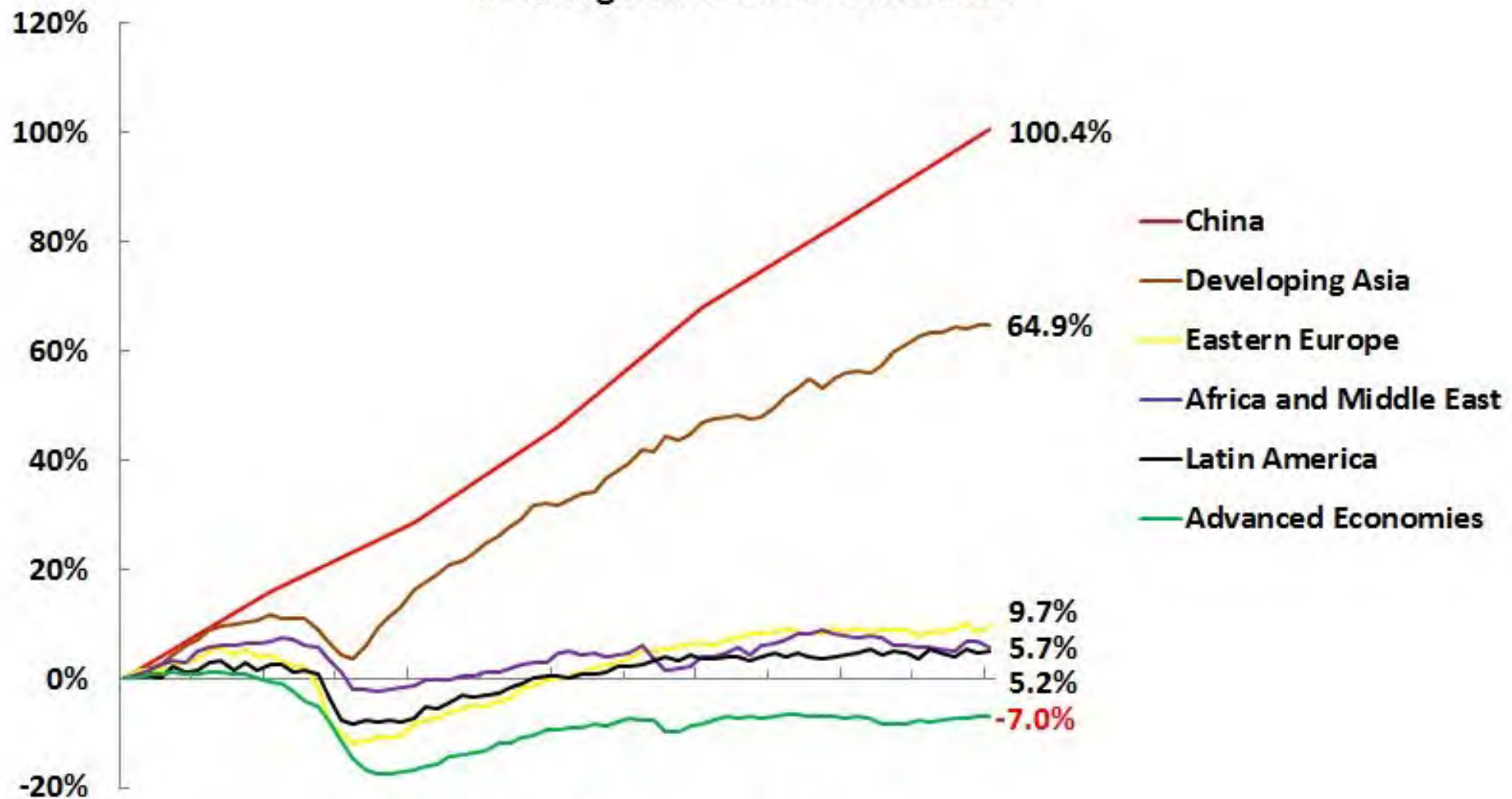
Value of Chinese Scrap Imports from All Origins (US\$)

Source: UN Comtrade Database



Industrial Production

% change June 2007 - June 2013



Source: Calculated from Netherlands Bureau for Economic Policy Analysis

In 2014 China Was the World's Top ...

- Builder of Roads
- Builder of Railways
- Builder of Housing
- Consumer of Copper
- Consumer of Aluminum
- Consumer of Steel
- Consumer of Paper
- Consumer of Plastic
- Buyer of Automobiles
- Buyer of PCs
- Buyer of laptops
- Buyer of Smartphones
- Buyer of Flat screens
- Buyer of Housing
- Buyer of Home Furnishings
- Buyer of Sandals

Chinese Copper Production/Scrap in Millions of Tons 1980 - 2011

Year	1980	1985	1990	1995	2000	2002	2004	2006	2008	2010	2011
Total Cu	.384	.413	.558	1.079	1.371	1.632	2.199	3.003	3.779	4.572	5.18
Scrap Cu	.088	.103	.215	.593	1.025	1.17	1.44	1.736	1.9	2.4	2.6
Scrap %	22%	26%	38%	55%	74%	71%	65%	57%	50%	52%	50.1%

50% of Chinese copper comes
from Scrap.

Chinese Imported Copper v Domestic Copper 2001 – 2011.

Millions of Tons

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Domestic	.3	.29	.3	.36	.46	.68	.7	.6	1	1.1	1.2
Imported	3.33	3.08	3.16	3.96	4.82	4.94	5.58	5.57	4	4.36	4.69
Total	3.63	3.37	3.46	4.32	5.28	5.62	5.65	5.63	5	5.46	5.89
% imported	91%	91%	91%	92%	91%	91%	98%	99%	80%	80%	80%

If it's not imported, where's it coming from?









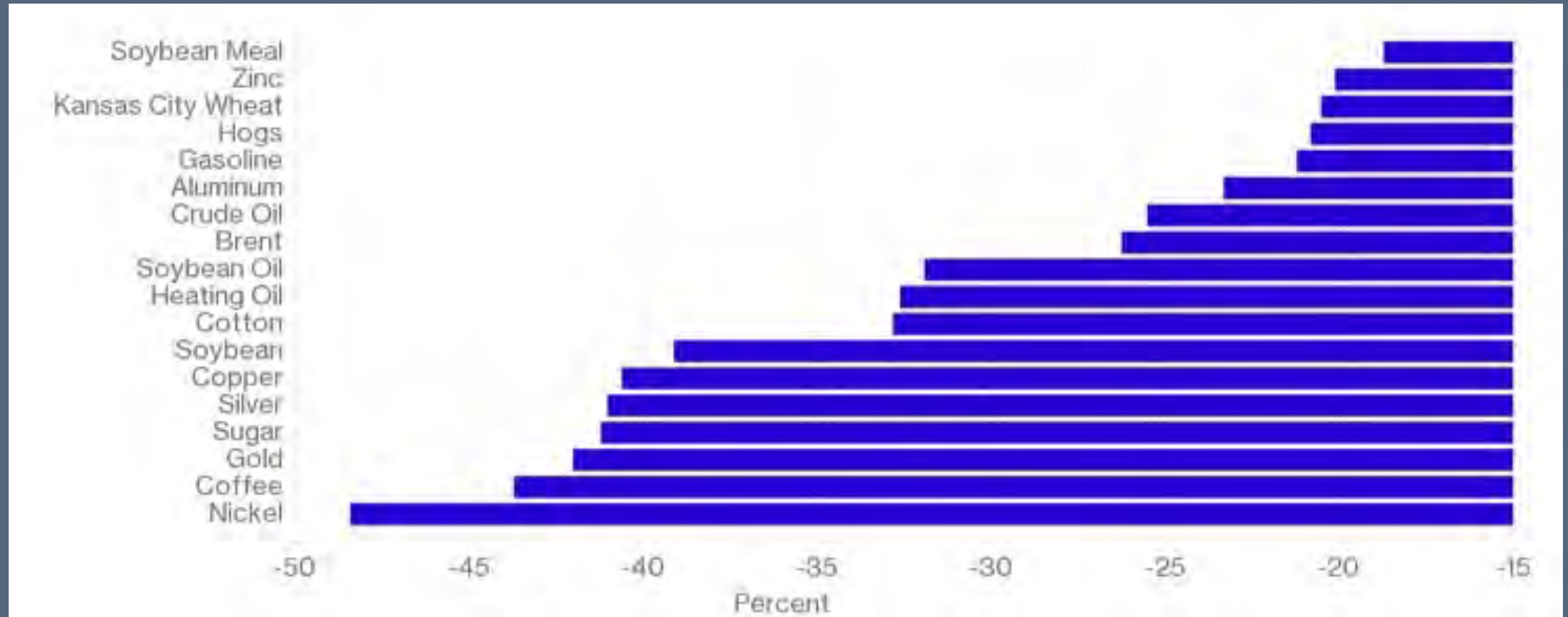








Bloomberg Commodities Index Drop from Bull Market Peak through August 17



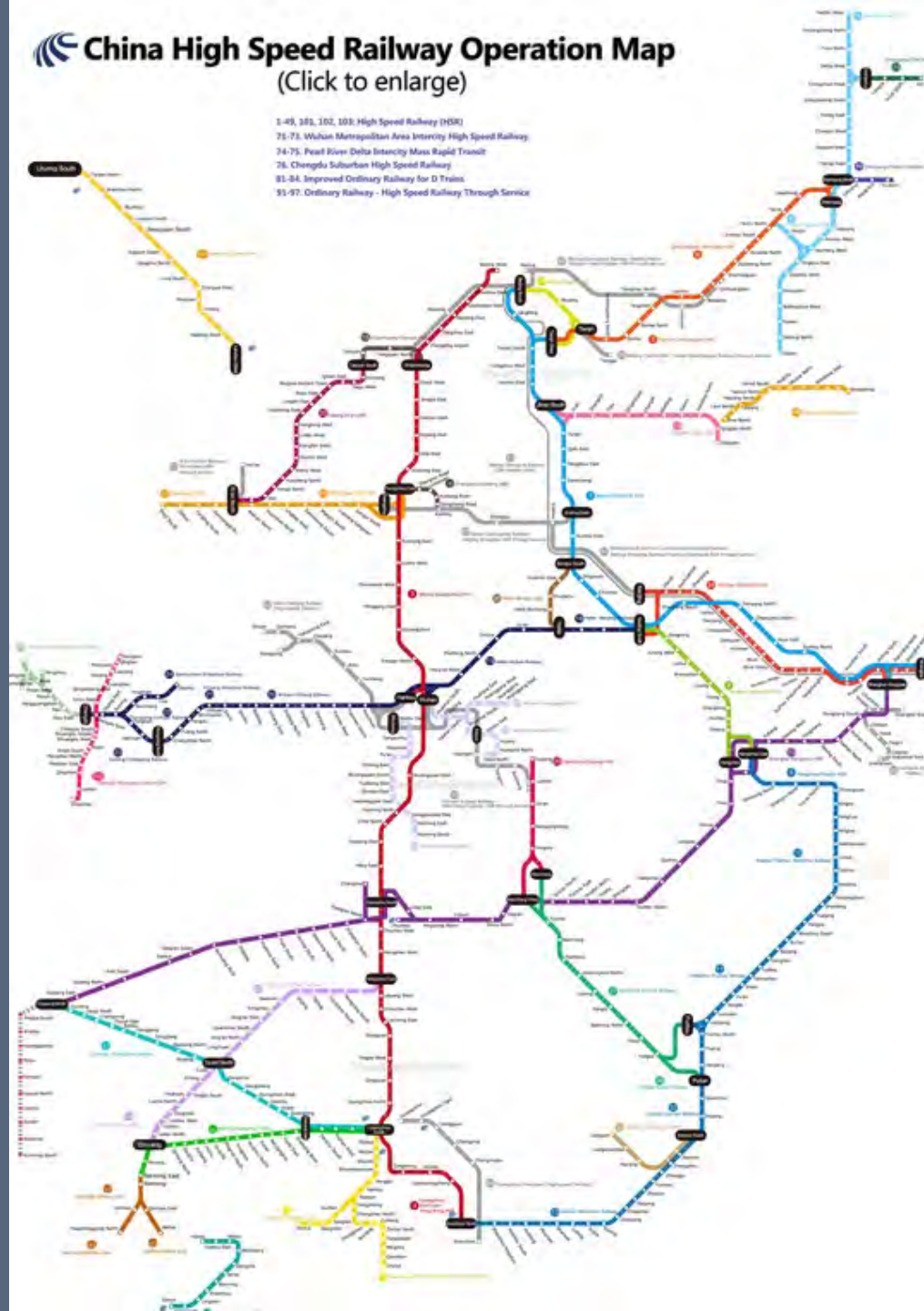
PMI	Decrease, faster rate
Output	Decrease, faster rate
New Orders	Decrease, faster rate
New Export Orders	Decrease, faster rate
Employment	Decrease, faster rate
Backlogs of Work	Increase, slower rate
Output Prices	Decrease, faster rate
Input Prices	Decrease, faster rate
Stocks of Purchases	Decrease, slower rate
Stocks of Finished Goods	Increase, faster rate
Quantity of Purchases	Decrease, slower rate
Suppliers' Delivery Times	Lengthening, from no change

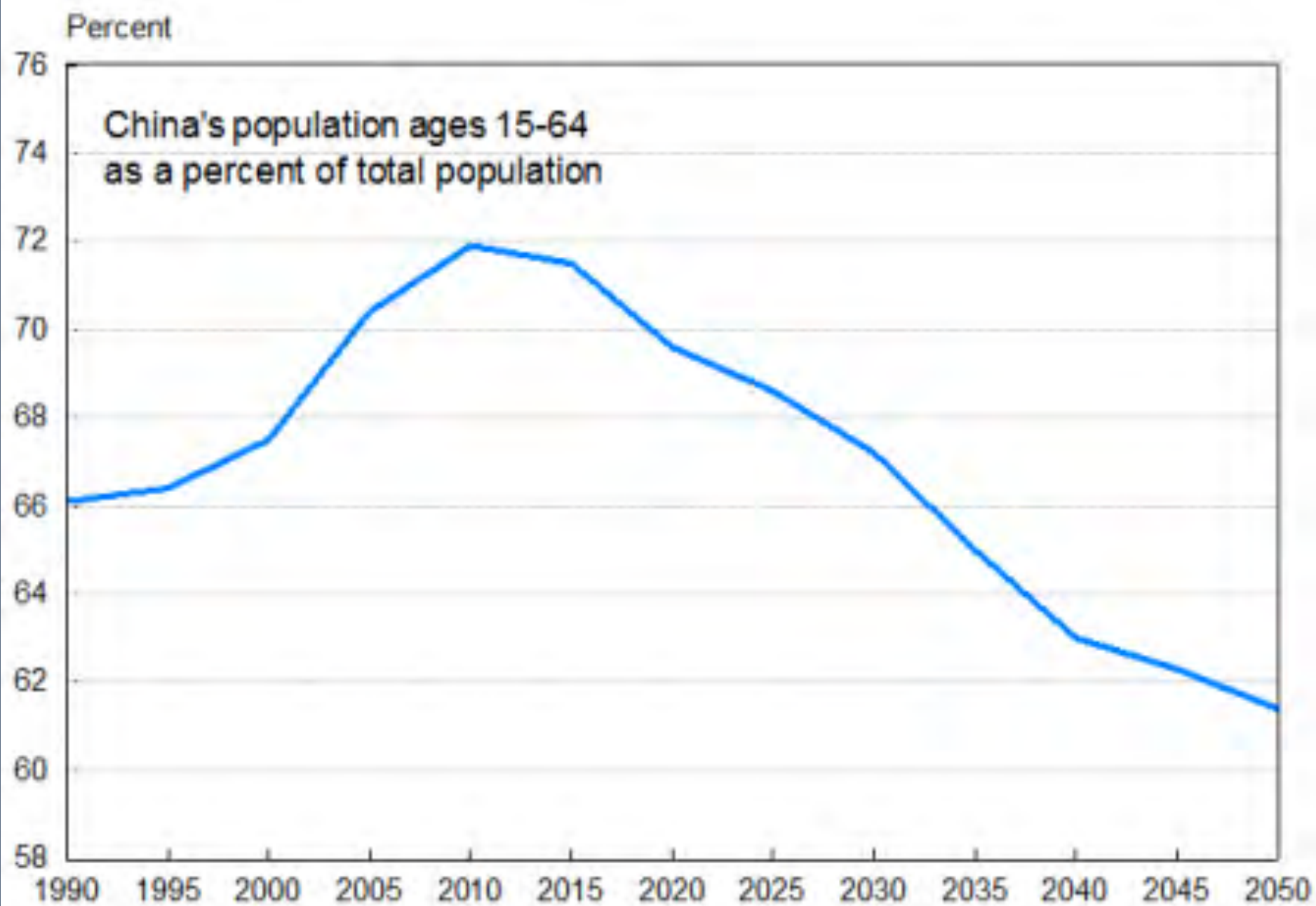
Source: Markit Economics

China High Speed Railway Operation Map

(Click to enlarge)

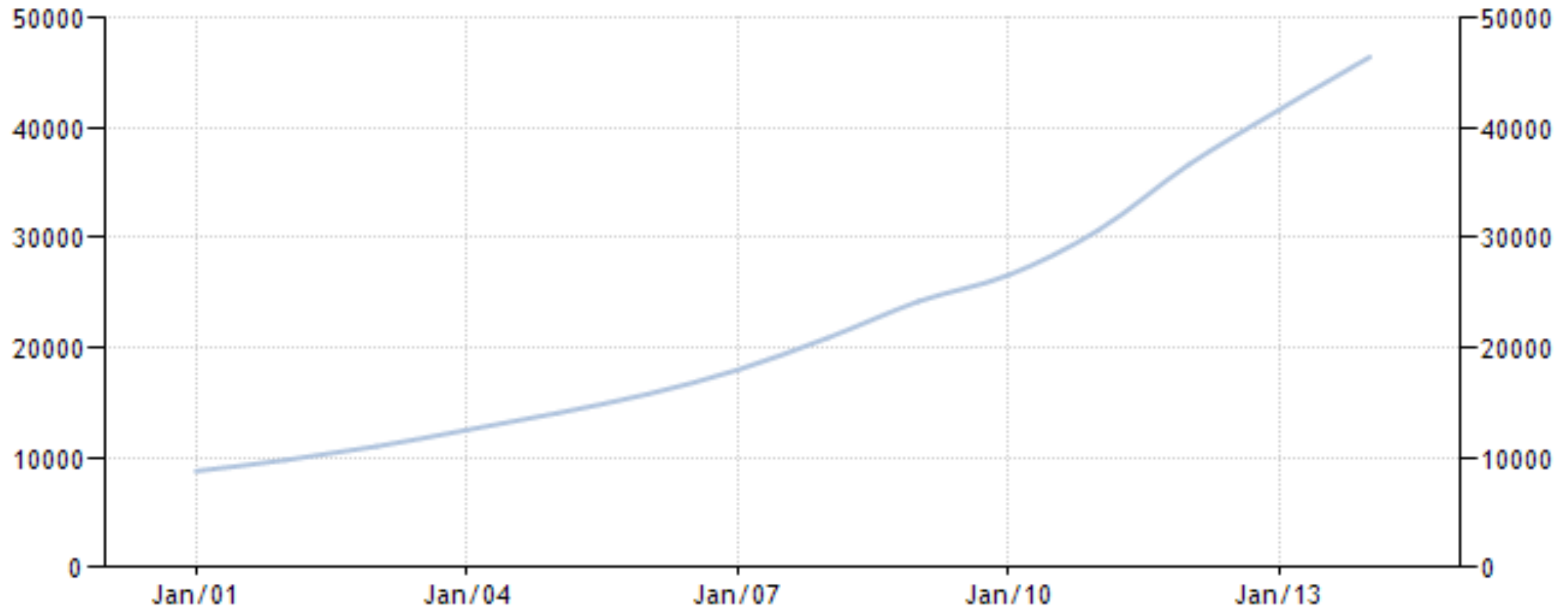
1-49, 101, 102, 103: High Speed Railway (HSR)
71-73: Wuhan Metropolitan Area Inter-city High Speed Railway
74-75: Pearl River Delta Inter-city Mass Rapid Transit
76: Chengdu Suburban High Speed Railway
81-84: Improved Ordinary Railway for D Trains
91-97: Ordinary Railway - High Speed Railway Through Service





The Elephant in the Chinese Scrap Heap

CHINA AVERAGE YEARLY WAGES IN MANUFACTURING



SOURCE: WWW.TRADINGECONOMICS.COM | NATIONAL BUREAU OF STATISTICS OF CHINA



红黄蓝灰
(PP) (PE)
工程低压
聚丙烯粒

供：注塑 拔管 压板
手机：13831634695
13131678283

手机交费
手机卡号
手机皮套
手机充电

聚甲醛龙碳
聚甲醛龙碳
聚甲醛龙碳

EVA
9973

ABS

2002 - ¥800 (\$95) /month



¥4000 (\$628)/month



2014: ¥ 3,479 (\$546.25) /month



China's Recycling Future

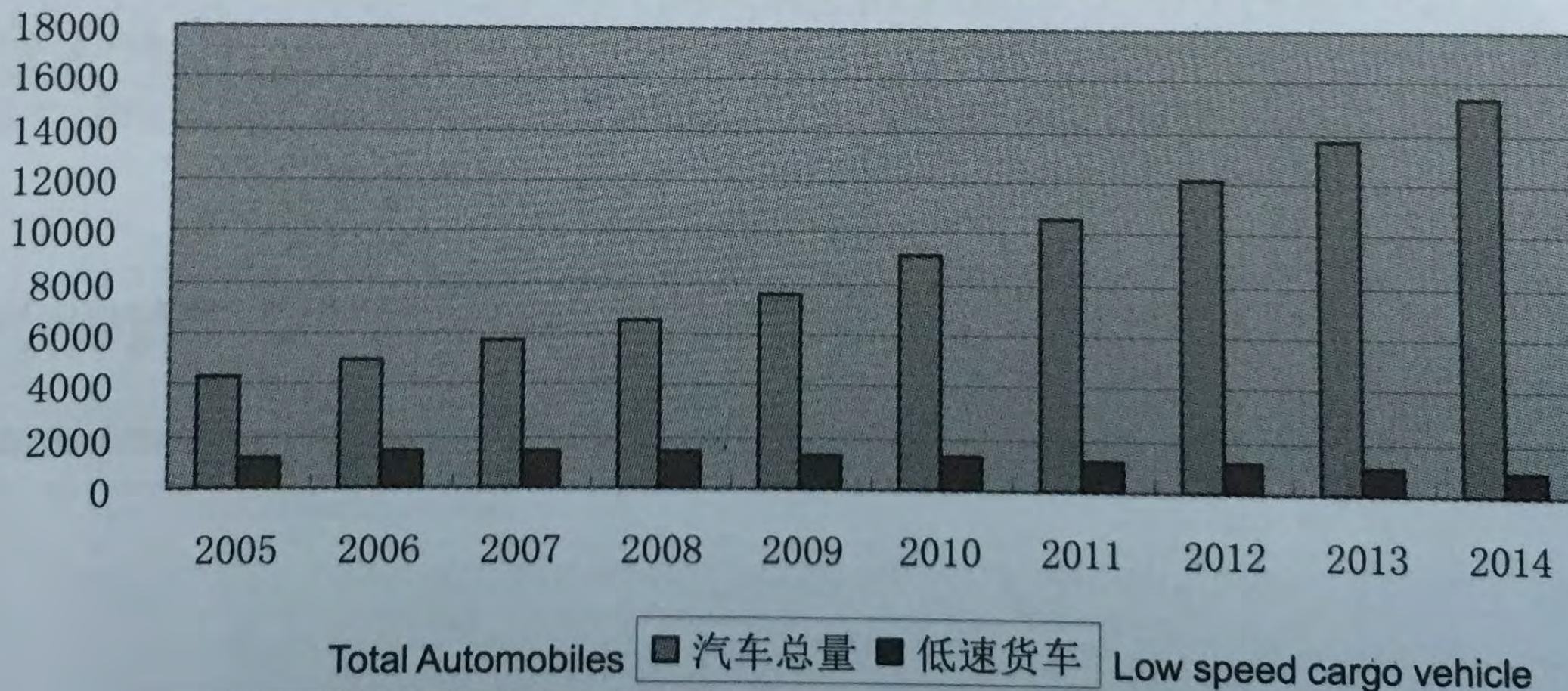




40%



近十年汽车及低速货车保有量增长情况
Growth of automobiles and low speed cargo vehicles in China in the past 10 years



NOTE: This is how the data was supplied to me when I requested it from MOFCOM.



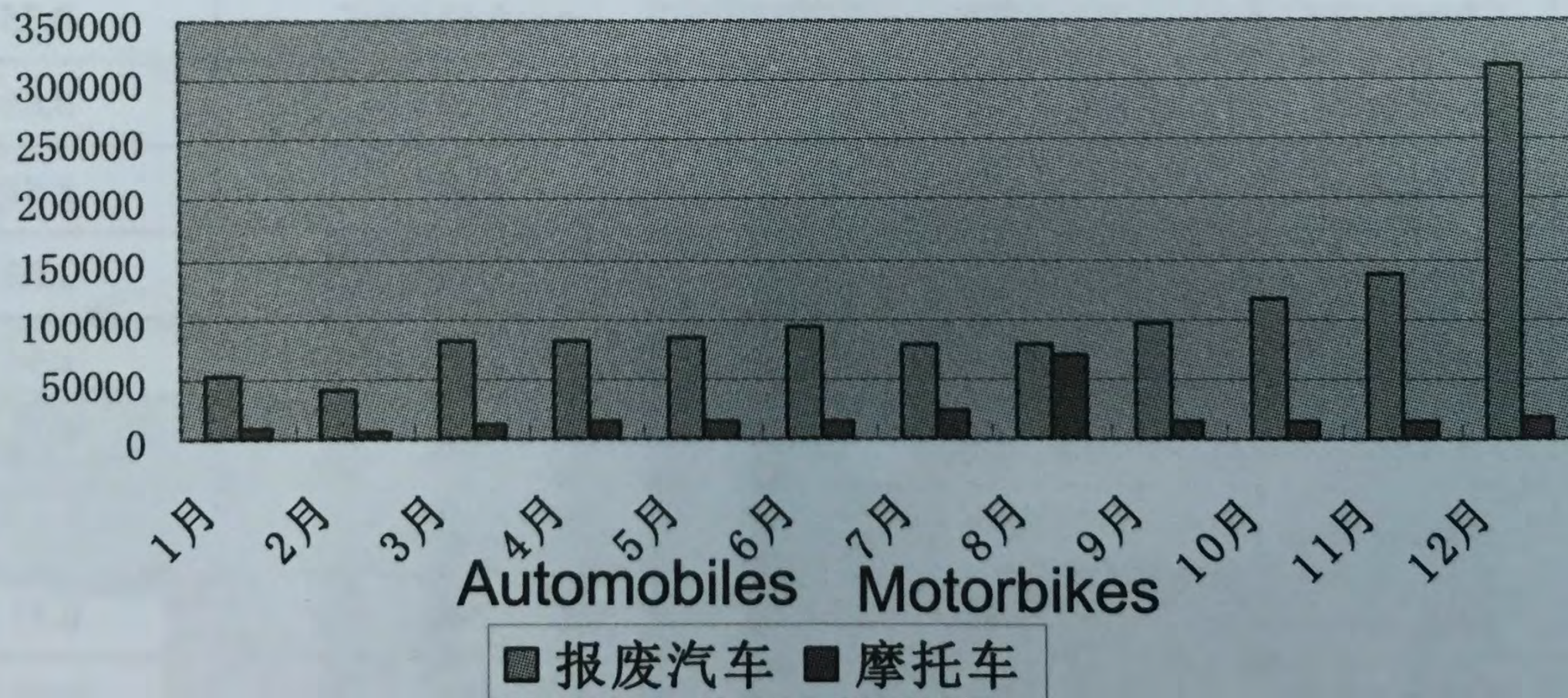
Only 2.2 million were recycled in a manner trackable in China.

In 2014, 4.81 million Chinese automobiles were de-registered in China.



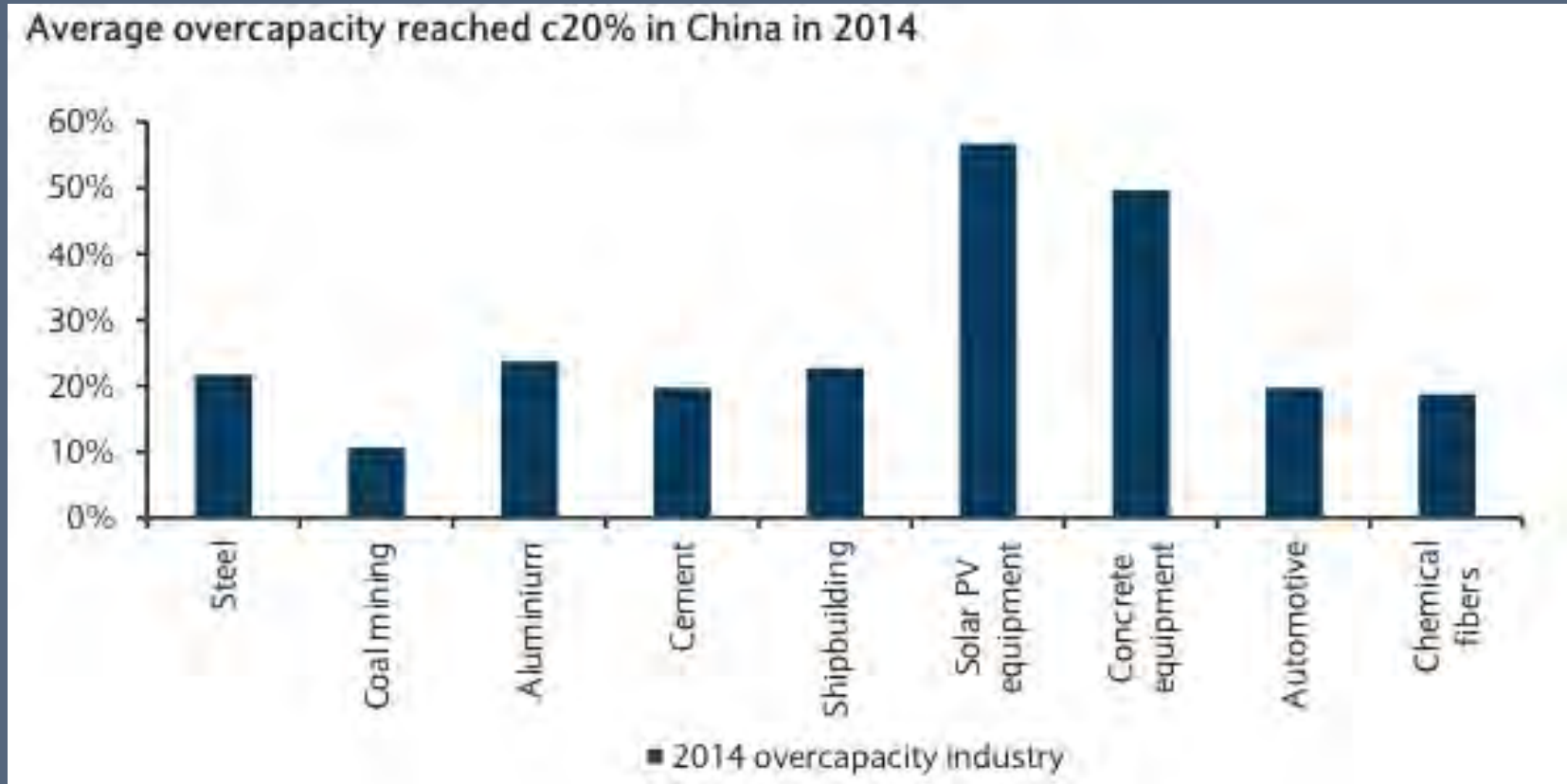
The Government is Part of the Problem

2014年按月份报废汽车回收拆解统计情况
Monthly Statistics of Vehicles Recycled in China in 2014





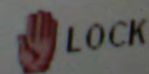
If you thought labor costs were painful ...



Crane 611

Material Name	Total Plan [tons]	Crane Plan [tons]	Crane Rep. [tons]	Status
HMS MIX	20.00	0.00	0.00	CONSTEEL
CROP END	5.00	0.00	0.00	Crane Wgt [t]
SHREDDDED IMP	60.00	19.80	5.60	75.50
BUSHELLING	30.00	30.00	13.45	Heat No
BUNDLE1	20.00	20.00	20.30	22466
PIG IRON	65.00	35.75	36.15	Charge Seq

1



Material Name

PIG IRON

BUSHELLING

BUNDLE1

CROP END

HMS MIX

SHREDDDED IMP



© E. Zhuravleva

Dogpicturesite.com

Before Green Fence – Wen'an, China



Green Fence Scrap in Hong Kong

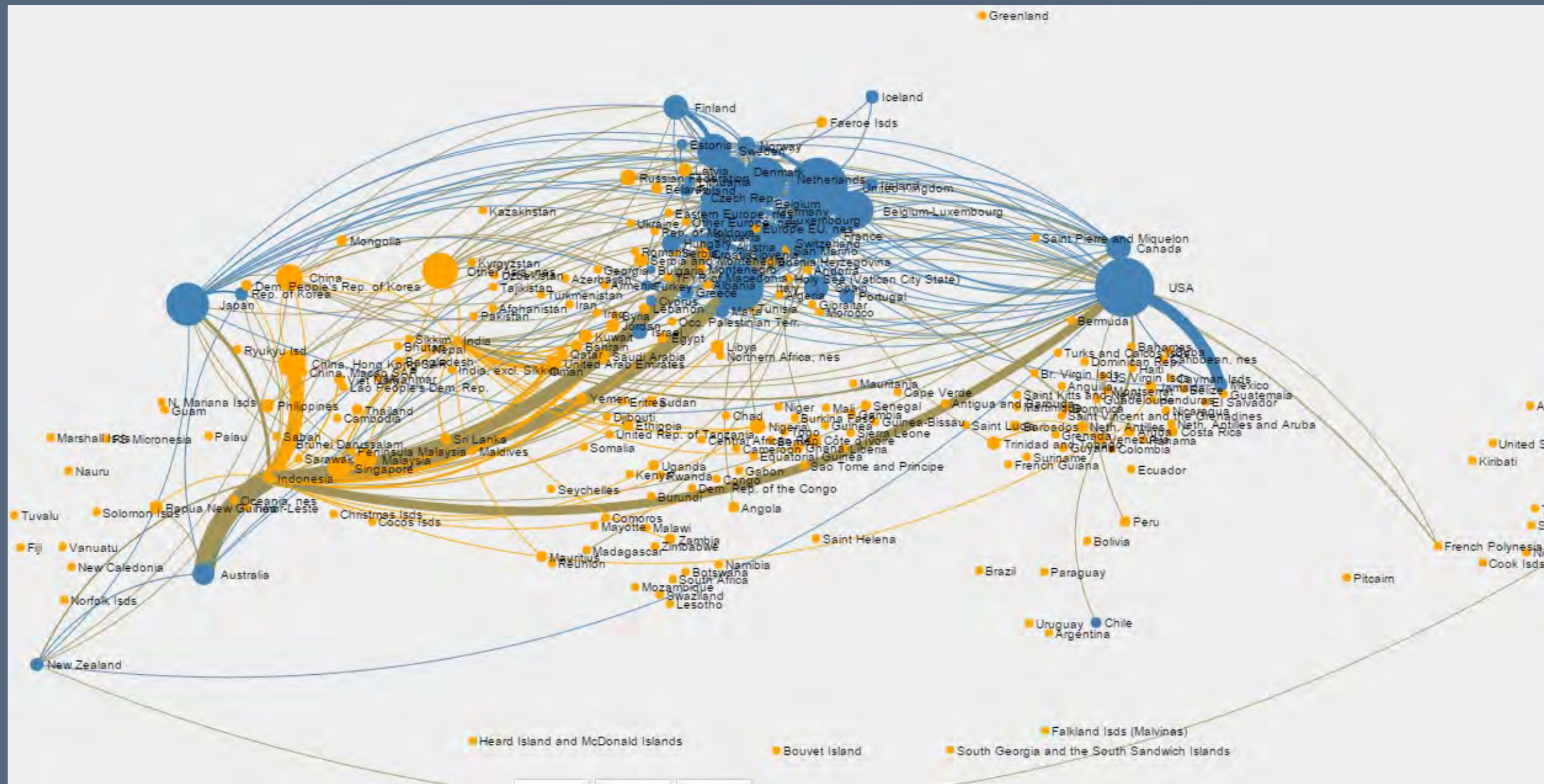


Green Fence Scrap Processing – Hong Kong

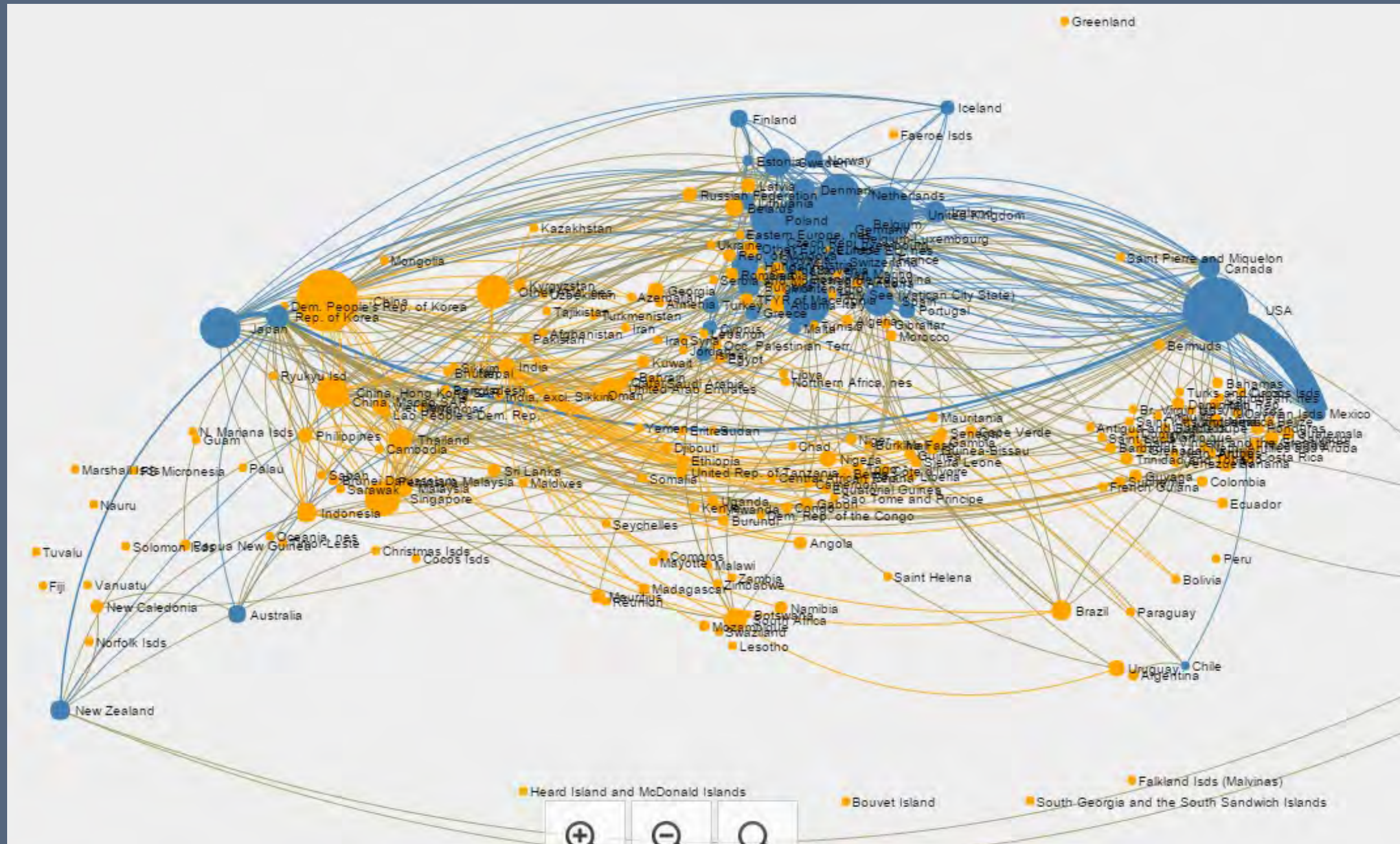




1996 Global E-Waste Trade Flows (HS Code 854810)



2012 Global E-Waste Flows (HS 854810)



1996 China Transboundary Waste Shipments (HS 854180)



Transboundary E-waste Shipments

More about this visualisation

Legend:

Territories

Trade Flows

Blue = Annex VII, Yellow = Non-Annex VII

Search:

Search Results:

China, Macao SAR

China, Hong Kong SAR

China

China, Hong Kong SAR
China, Macao SAR

Information Pane

China, Macao SAR

TradeGroup: Non-OECD

BaseIGroup: Non-Annex VII

Latitude: 22.11

Longitude: 113.32

Continent: Asia

Connections:

Mutual (0)

No mutual links

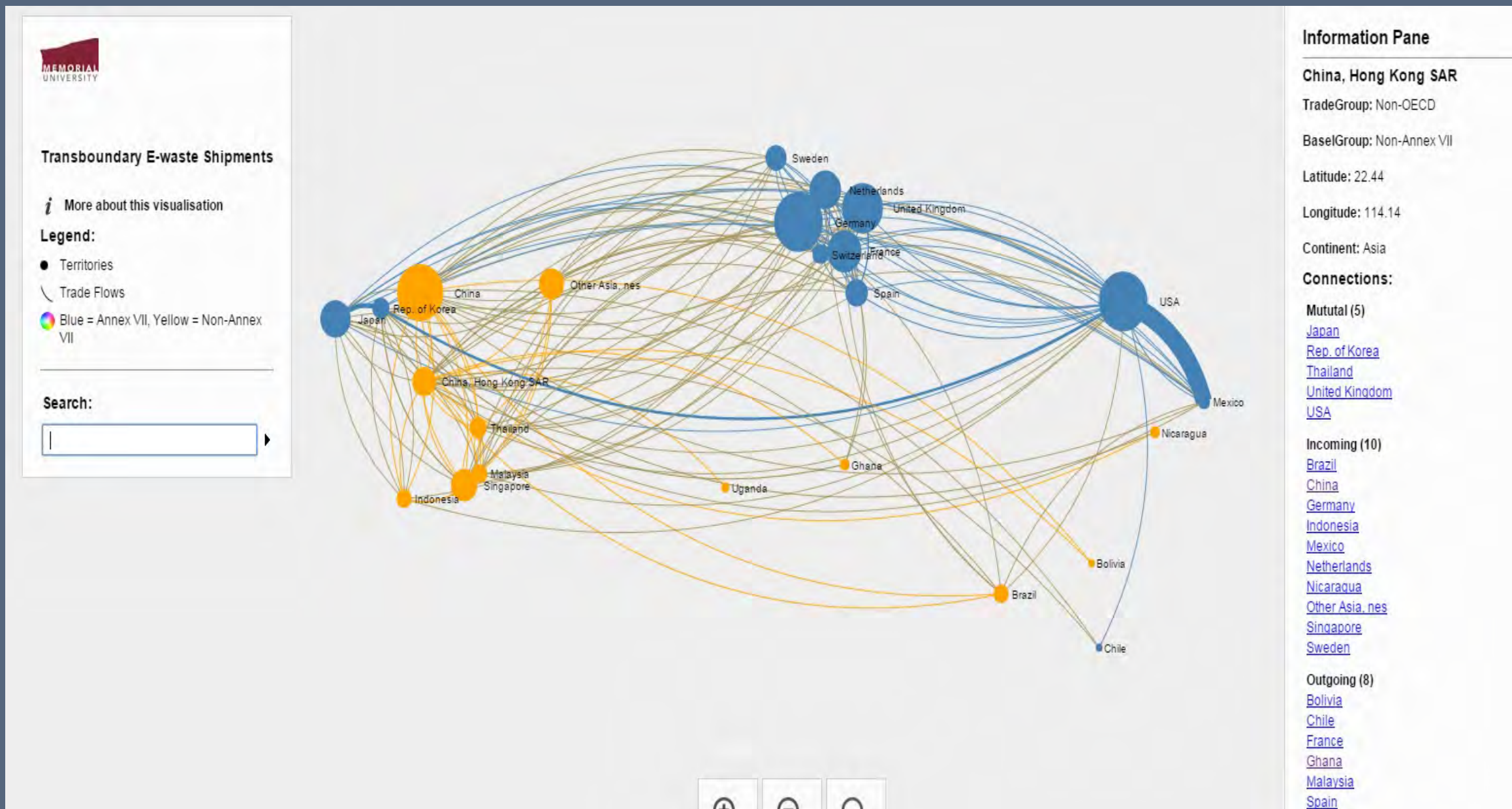
Incoming (1)

[China, Hong Kong SAR](#)

Outgoing (0)

No outgoing links

2012 China Transboundary Waste Shipments (HS 854810)





Exporting Harm

The High-Tech Trashing of Asia



February 25, 2002

Prepared by

The Basel Action Network (BAN)
Silicon Valley Toxics Coalition (SVTC)

With contributions by

Toxics Link India
SCOPE (Pakistan)
Greenpeace China

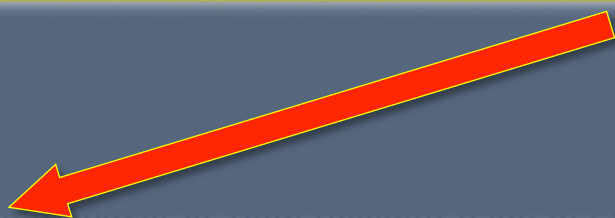
80%

80%

80%

80%

and environmental and health protections minimal. Very knowledgeable and informed industry sources, however, have estimated that around 80% of what is diverted to recycling is actually exported to Asia.⁴¹



40. US ENVIRONMENTAL PROTECTION AGENCY, ANALYSIS OF FIVE COMMUNITY/CONSUMER RESIDENTIAL COLLECTIONS OF END-OF-LIFE ELECTRONIC AND ELECTRICAL EQUIPMENT, (Nov. 24, 1998), at <http://www.eeb.org/activities/wsaste/weee.htm>.

41. Telephone Interview with Mike Magliaro, Life-Cycle Business Partners – Salem, New Hampshire (Feb. 20, 2002)

42. Telephone Interview with John Bodson, US Department of Commerce International Trade Specialist (Jan. 29, 2002)

43. *Id.*



Quantitative Characterization of Domestic and Transboundary Flows of Used Electronics

Analysis of Generation, Collection, and Export in the United States

December 2013

Huabo Duan, T. Reed Miller, Jeremy Gregory, Randolph Kirchain



Jason Linnell



Under the umbrella of:

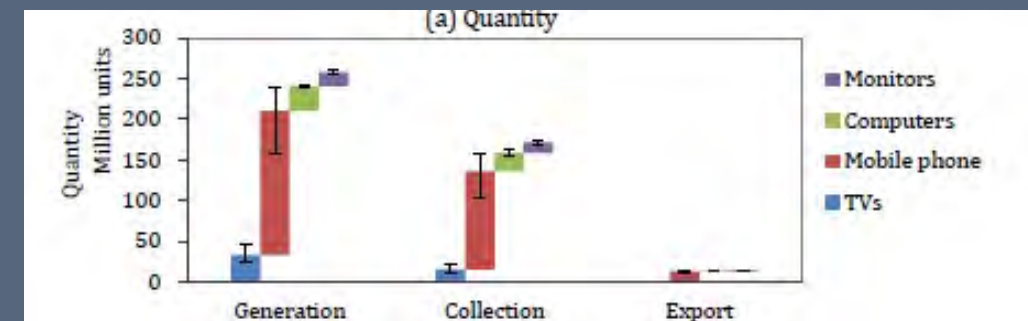


With financial support from:



2010 Estimates for US

- 258.2 million units generated
- 8.5% export by units
- 3.1% export by weight



Used Electronic Products:

An Examination of U.S. Exports

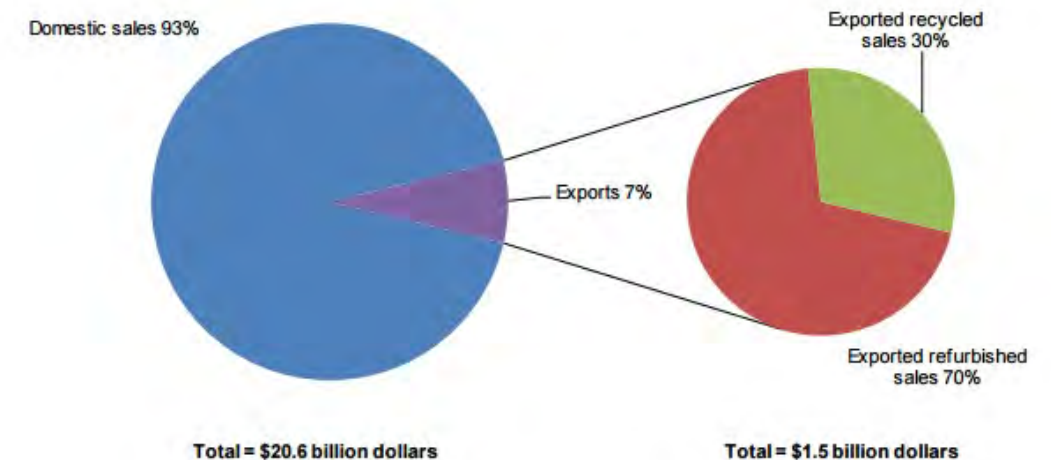
Investigation No. 332-528
USITC Publication 4379
February 2013



2011 US Exports

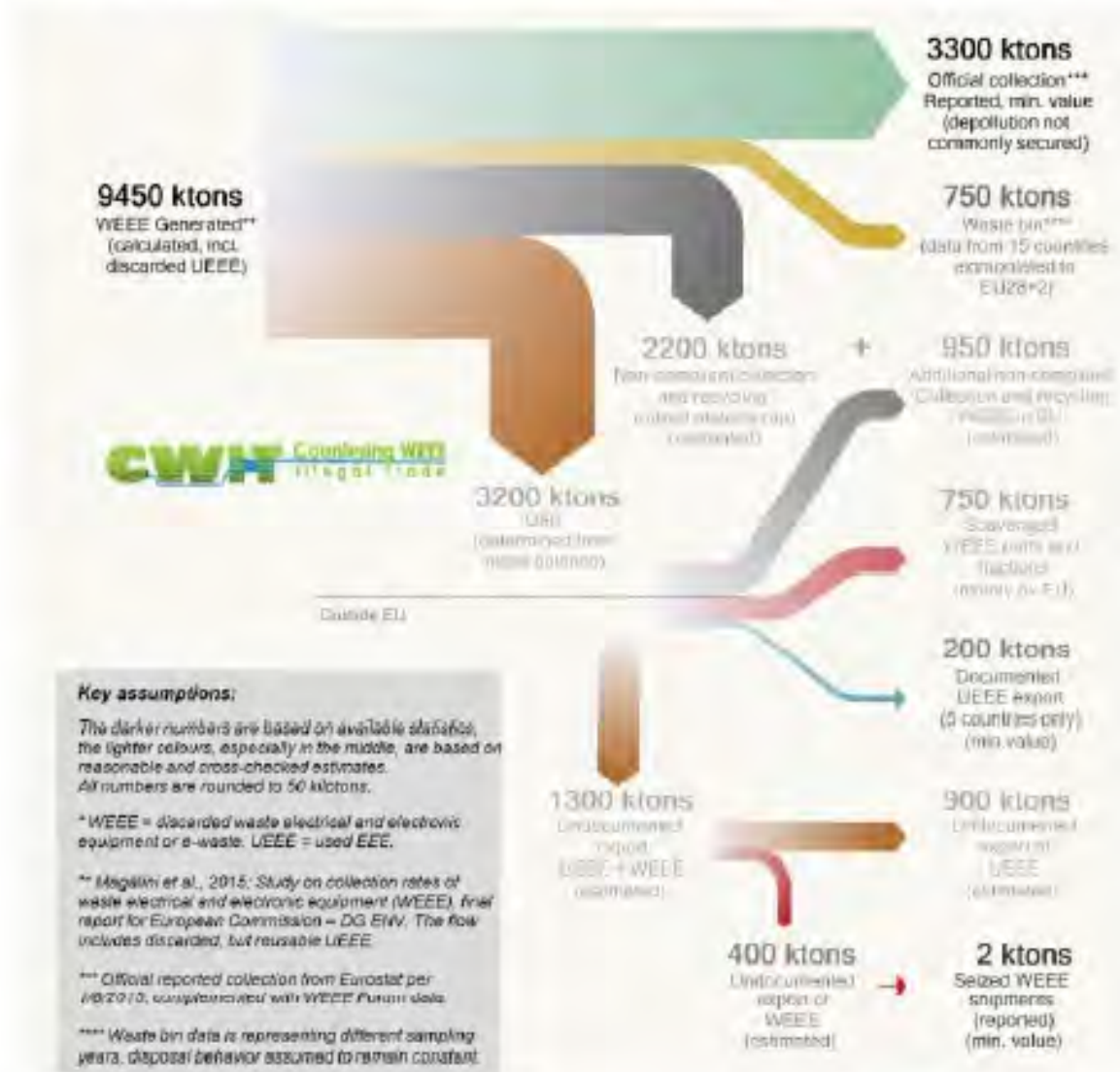
- 83% of US WEEE recycled, repaired at home
- 7% export by value
- 16.8% export by weight (using 2011 EPA estimate of 4.5 million tons generation).

FIGURE ES-2 Exports were 7% of UEP sales in 2011



Annex

What happens to Europe's discarded electronics and electrical equipment:



Europe 2011

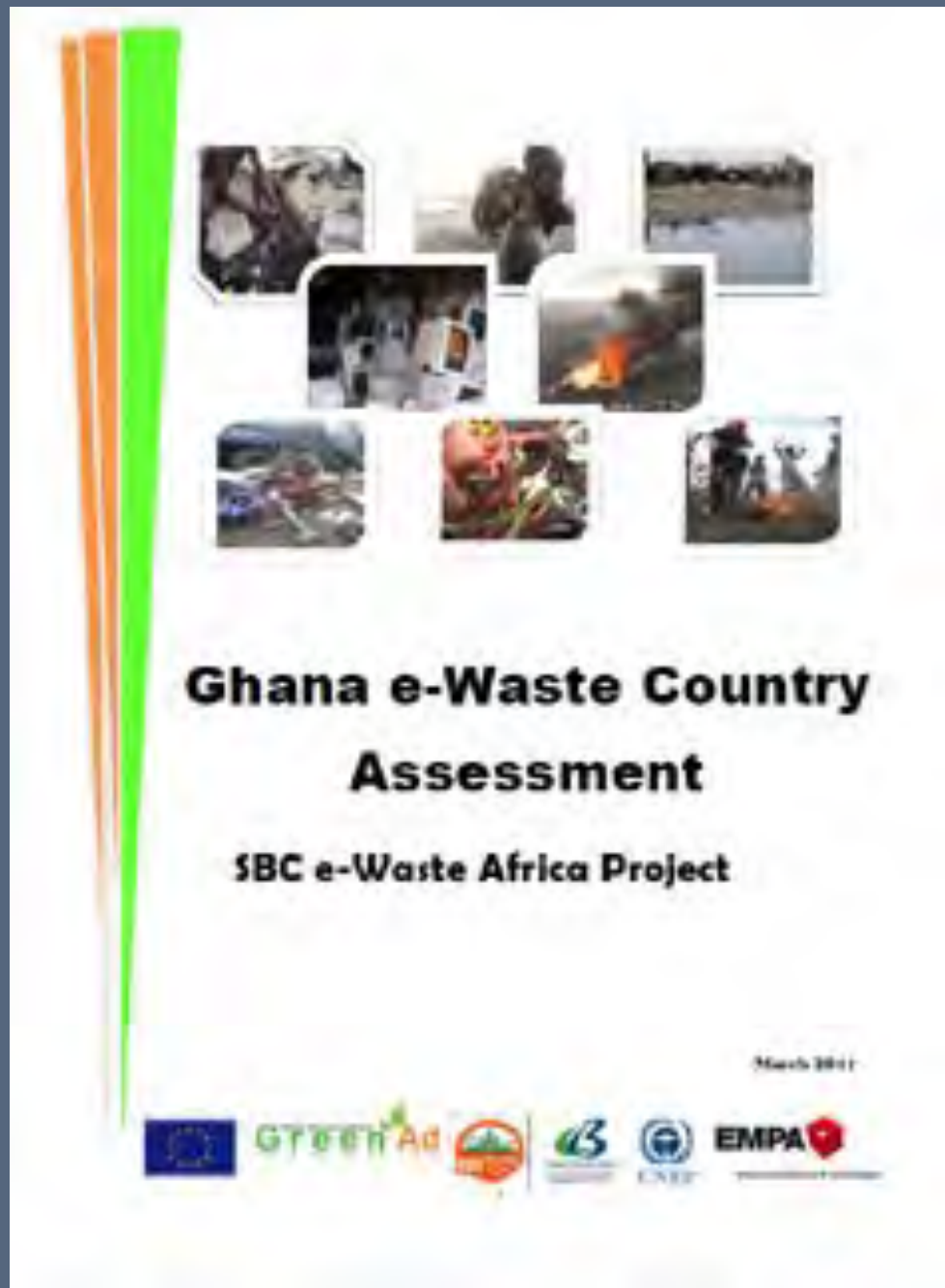
- 9.45 million tons generated
- 4.2% of Europe's WEEE is exported as non-working "e-waste."



Ghana 2009 – 2011

- The EU Commission
- The Basel Convention
- US EPA
- UN Environment Program

85% of imported
WEEE used and
working



📷 Agbogbloshie: the world's largest e-waste dump - in pictures

Discarders of electronic goods expect them to be recycled properly. But almost all such devices contain toxic chemicals which, even if they are recyclable, make it expensive to do so. As a result, illegal dumping has become a lucrative business.

Photographer Kevin McElvaney documents Agbogbloshie, a former wetland in Accra, Ghana, which is home to the world's largest e-waste dumping site. Boys and young men smash devices to get to the metals, especially copper. Injuries, such as burns, untreated wounds, eye damage, lung and back problems, go hand in hand with chronic nausea, anorexia, debilitating headaches and respiratory problems. Most workers die from cancer in their 20s

Thursday 27 February 2014 13.53 GMT



Shares

19,163

Save for later



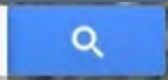
Adam Nasara, 25, uses Styropor, an insulating material from refrigerators, to light a fire



Y

Directions

Total distance: 481.02 m (1,578.16 ft)

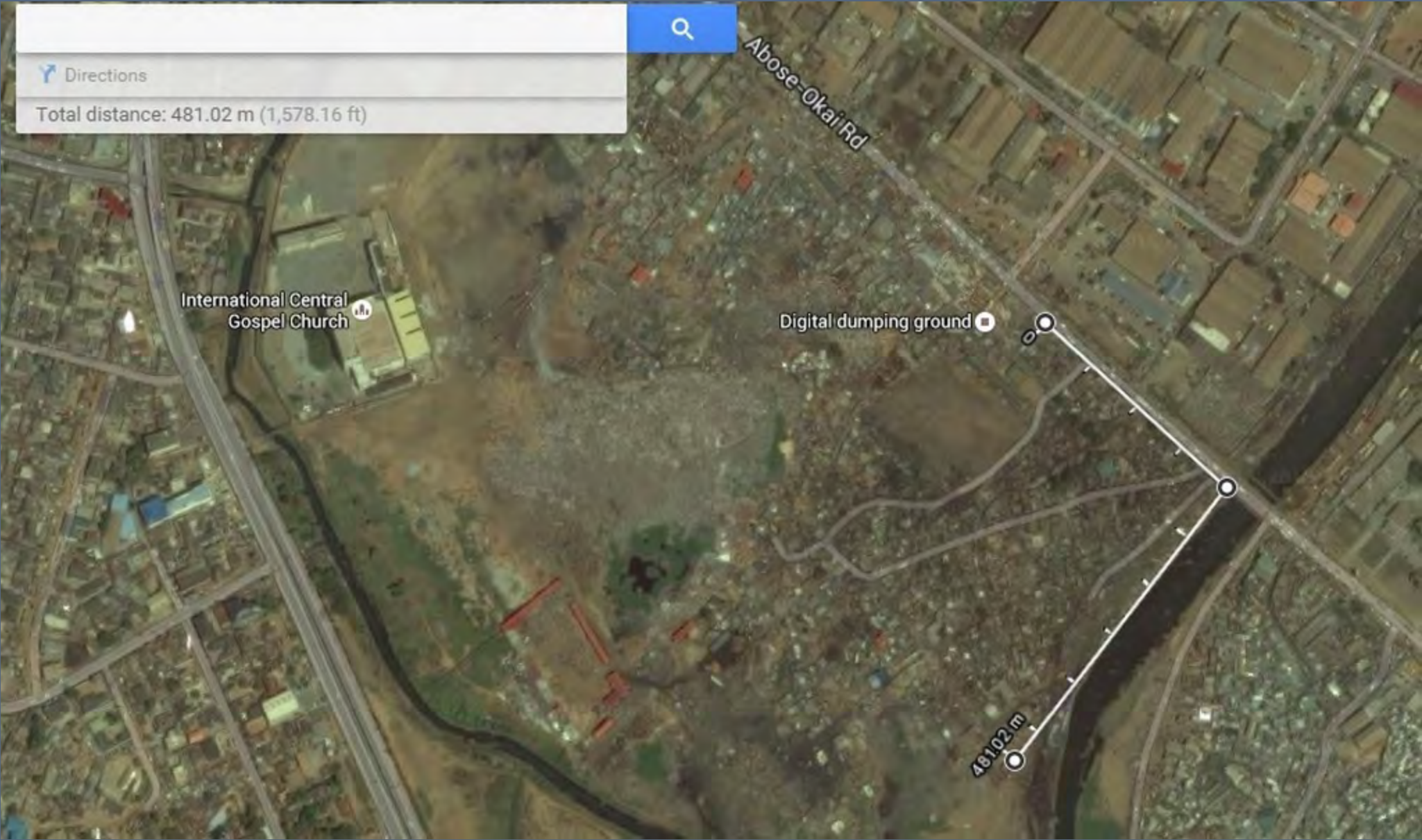


Abose-Okai Rd

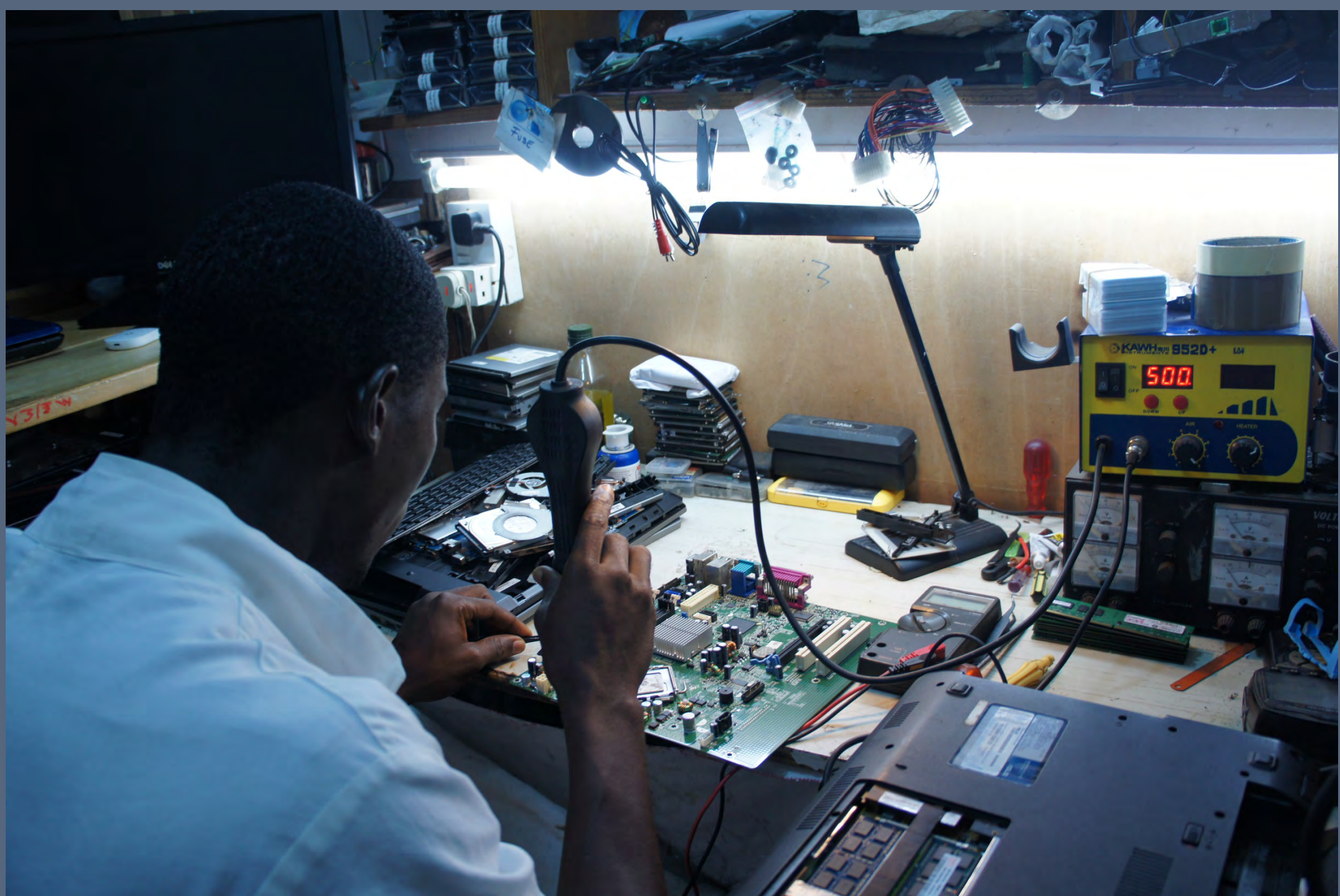
International Central Gospel Church

Digital dumping ground

481.02 m















Components Recycling in China



Guiyu, August 2013

Two Component Recycling Streams



Re-use in China



**Export for refining (EU/
Japan)**





Xie Zhenhua, Vice-Chair,
Nat'l Development & Reform Commission
(Guiyu, 2007)

Fixing the World Together: iFixit + Electronic Recyclers International, Inc.





Who ARE
these people?

TRAVELS IN THE BILLION-DOLLAR TRASH TRADE

JUNKYARD PLANET

ADAM MINTER

