

# FAMILY PLANNING MARKET REPORT

MAY 2015

#### ACKNOLWEDGEMENTS:

This report was produced as part of the FP2020 Global Markets Visibility Project that CHAI, in conjunction with the Reproductive Health Supplies Coalition (RHSC) and the FP2020 Market Dynamics Working Group (FP2020 MDWG), launched in early 2014.

The shipment data provided by suppliers was pivotal to addressing information gaps and constructing a more comprehensive view of the reproductive health commodities market. We would like to thank participating suppliers (Bayer, CR Zizhu, Cupid, Famy Care, Helm-Fresenius, Merck/MSD, Pfizer, Pregna, PT Tunggal, Shanghai Dahua, and SMB) as well as our partners, the Concept Foundation and i'solutions, for their support in collecting and aggregating data from the Generic Manufacturers for Reproductive Health (the GEMS Caucus) and female condom manufacturers, respectively.

We are also grateful to our colleagues in the FP2020 MDWG, Coordinated Supply Planning Group, UNFPA, USAID, and JSI | DELIVER for their invaluable feedback in the development of various market analyses.

# AFTER GROWING FROM 2011 TO 2012, THE CONTRACEPTIVE MARKET IN THE 69 FP2020 COUNTRIES DECLINED FROM US\$361 MILLION IN 2012 TO US\$280 MILLION IN 2013<sup>1</sup>

## The FP2020 market grew from US\$277 million in 2011 to US\$361 million in 2012 and then declined to US\$280 million in 2013.

The FP2020 market grew 30 percent year-over-year in 2012, largely driven by a shift in method mix in favor of injectables and implants, which have higher unit costs relative to other methods. The implant price reductions in 2013, combined with decreased purchase volumes of male condoms, injectables, IUDs, and orals, reduced the 2013 FP2020 market size to 2011 levels. (Exhibit 1)

## Short-acting methods (including condoms, injectables, and oral contraceptives) continue to dominate the FP2020 market despite a significant increase in implant purchase volumes.

Short-acting methods represented 80 percent of the total FP2020 market value in 2013, but represented 62 percent of couple-years of protection (CYPs) supplied.<sup>2</sup> Implant purchase volumes have nearly doubled between 2011 and 2013 to 6 million units annually. The estimated spend on implants and IUDs, long-acting and reversible contraceptives (LARCs), was US\$55 million in 2013, representing 20 percent of the total FP2020 market value and 38 percent of CYPs provided. (Exhibits 1–3)

## Seven countries represented half of the total FP2020 market value in 2013: Bangladesh, Uganda, Ethiopia, Kenya, Pakistan, Zimbabwe, and Nigeria. (Exhibit 7)

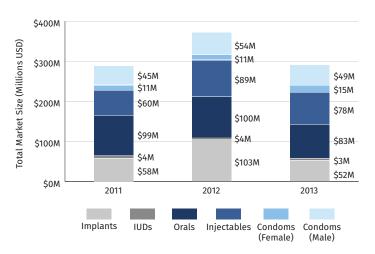
## Donors spent US\$203 million, accounting for 73 percent of total spending on family planning products, in 2013.

Donors reporting to the Reproductive Health Interchange (RHI) increased total funding for contraceptives in the FP2020 countries from US\$171 million to US\$224 million between 2011 and 2012, then decreased total funding to US\$203 million in 2013. However, the CYPs supplied annually by donors increased every year from 2011 to 2013. (Exhibit 9)

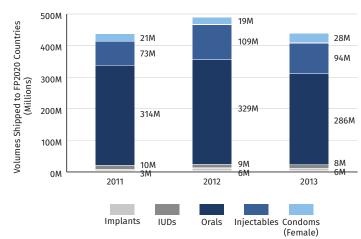
# Although FP2020 has reported an increase in total women on modern methods from 265 million in 2012 to 274 million in 2013, this increase could not be confirmed using supplier-reported purchases by institutional buyers and government-affiliated procurers.<sup>3</sup>

Visibility into the commercial sector of the FP2020 market and ministry of health (MOH) procurements supplied by other manufacturers is required to reconcile these differences. (Exhibit 11)

#### **EXHIBIT 1: TOTAL FP2020 MARKET SIZE (USD)**



## EXHIBIT 2: TOTAL FP2020 MARKET IN TERMS OF VOLUMES (MALE CONDOMS SEPARATED)



MALE CONDOM SHIPMENTS				
2011	2012	2013		
1.62B	1.84B	1.64B		

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, December 2014; [3] UNFPA Contraceptive Price Indicator, 2011–2013; [4] PPMR Data, September 2014; [5] USAID, "Couple Years of Protection (CYP)," April 2014; [6] IAP Implant Price.

<sup>1.</sup> The FP2020 market is based on volumes purchased by institutional buyers and MOH or government-affiliated procurers from RHI (male and female condoms) and historical supplier-reported shipment data (female condoms, implants, injectables, IUDs, and orals) for FP2020's 69 focus countries, defined as countries with a 2010 gross national per capita annual income (GNI) less than or equal to US\$2,500. Although South Africa made an FP2020 commitment, its GNI was greater than US\$2,500 per year.

<sup>2.</sup> Couple-years of protection is the estimated protection provided by a family planning method during a one-year period, based on the volumes of all contraceptives sold or distributed to clients during that period. This report relies upon USAID CYP conversion factors; USAID, "Couple Years of Protection (CYP)," April 2014, available at http://www.usaid.gov/what-we-do/global-health/family-planning/couple-years-protection-cyp.

<sup>3.</sup> Family Planning 2020, "FP2020 Partnership in Progress, 2013–2014," December 2014, pp. 100–101, 127.

## Supplier-reported volumes for female condoms, implants, injectables, IUDs, and orals and RHI-reported shipment data for female condoms and male condoms are the primary sources used to estimate the FP2020 market size.<sup>4</sup>

These data sets include MOH or government-affiliated procurement and donor-funded purchases (USAID, UNFPA, SMOs, etc.) and do not include products sold through commercial channels. In addition, the data does not include suppliers that are not participating in the FP2020 Global Markets Visibility Project or included in RHI. CHAI is still seeking data from suppliers in countries such as India and Indonesia where laws favor local production over imports. 5 Contraceptive suppliers who fall outside of the purview of donors and NGOs in the FP2020 MDWG are still being identified, and their data is not yet included.

## The identified FP2020 market size increased 30 percent from 2011 to 2012 and then declined 23 percent year-over-year in 2013.

## The FP2020 market size increased from US\$277 million to US\$361 million from 2011 and 2012.

Increased spending on injectables and implants was the primary driver of growth in the FP2020 market between 2011 and 2012. Injectable shipment volumes increased from 73 million to 109 million from 2011 and 2012, translating into a nearly US\$30 million increase in annual expenditures. Implant shipment volumes increased from 3.1 million to 5.8 million from 2011 and 2012, resulting in a greater than US\$45 million increase in expenditures.

## The implant price reductions in 2013, combined with the decline in purchase volumes of male condoms, injectables, IUDs, and orals, reduced the FP2020 market size in 2013 to US\$280 million.

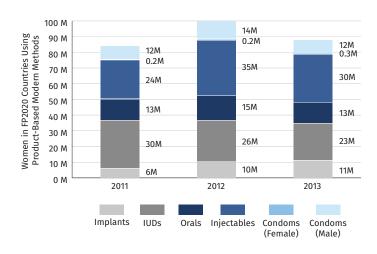
The 50 percent reduction in the price of implants in 2013 halved the size of the implant market. However, the volume of implants purchased continued to increase from 5.8 million to 6.1 million from 2012 to 2013. A decline in purchase volumes and spending on male condoms, injectables, IUDs, and orals further contributed to the reduction in market size between 2012 and 2013.

## Between 2011 and 2013, there was a shift in the method mix towards implants and injectables.

In comparison to 2011, an additional US\$18 million was spent on injectables in 2013. Although the implant market size has declined, this was largely driven by the reductions in the price of implants in 2013, as the purchase volumes of implants have nearly doubled between 2011 and 2013.

Consistent with volume and spending trends, the number of women utilizing product-based methods grew from 85 million to 101 million from 2011 to 2012 and declined to 90 million in 2013

#### **EXHIBIT 3: TOTAL FP2020 MARKET IN TERMS OF USERS**



Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, December 2014; [3] UNFPA Contraceptive Price Indicator, 2011–2013; [4] PPMR Data, September 2014; [5] USAID, "Couple Years of Protection (CYP)," April 2014; [6] IAP Implant Price.

<sup>4.</sup> For the female condom market, historical supplier-reported shipment data from Cupid and i\*solutions procurement volumes were supplemented with RHI shipment volumes for suppliers not participating in the FP2020 Global Markets Visibility Project. i\*solutions confirmed its procurement volumes associated with the Universal Access for Female Condom (UAFC) Joint Programme were not reported in RHI.

# SHORT-ACTING METHODS CONTINUE TO DOMINATE THE FP2020 MARKET DESPITE A SIGNIFICANT INCREASE IN IMPLANT PURCHASE VOLUMES

The FP2020 market for LARCs has declined from US\$62 million in 2011 to US\$55 million in 2013, largely driven by a decline in the implant purchase price per unit.

As a result, the market share of LARCs has decreased from 22 percent to 20 percent over the same period.

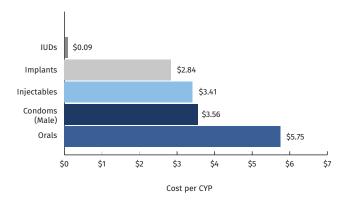
Although LARCs represented close to 40 percent of users supported, the commodity spend on LARCs at US\$55 million in 2013 was less than a quarter of the total FP2020 market value.

This is because the weighted average cost per CYP of LARCs is 81 percent lower than that of short-acting methods.<sup>6</sup>

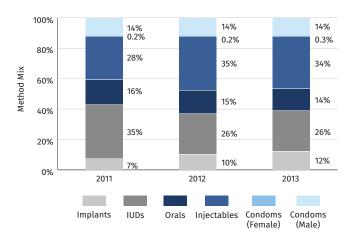
Based on the aggregated shipment data, the method mix in user terms has remained relatively stable between short-acting methods and LARCs between 2011 and 2013.

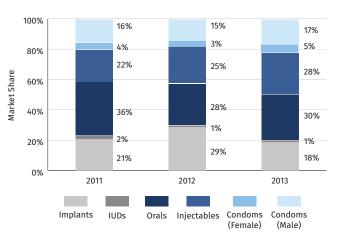
Short-acting methods continue to dominate market share in terms of users at 62 percent in 2013. Among the short-acting methods, injectables exhibited the greatest change with an increase in share of users, from 28 percent to 34 percent between 2011 and 2013. Among LARCs, there was a decrease in IUD share from 35 percent to 26 percent and increase in implant share from 7 percent to 12 percent from 2011 to 2013.

EXHIBIT 4: COST PER COUPLE YEARS OF PROTECTION BY METHOD (USD) <sup>7</sup>						
METHOD	UNITS PER CYP	UNIT COST	COST PER CYP			
Condoms (Female)	120.0	\$0.54	\$65.04			
Condoms (Male)	120.0	\$0.03	\$3.56			
Implants	0.3	\$8.50	\$2.84			
Injectables	4.1	\$0.83	\$3.41			
IUDs	0.2	\$0.43	\$0.09			
Orals	16.7	\$0.35	\$5.75			



#### EXHIBIT 5: FP2020 CONTRACEPTIVE METHOD MIX (IN TERMS OF USERS) AND MARKET SHARE (IN TERMS OF DOLLARS)8





Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, December 2014; [3] UNFPA Contraceptive Price Indicator, 2011–2013; [4] PPMR Data, September 2014; [5] USAID, "Couple Years of Protection (CYP)," April 2014; [6] IAP Implant Price.

Market share is the percentage of total value of shipment volumes in a market captured by a certain contraceptive method; Method mix is the percentage distribution of contraceptive users by method.

<sup>6.</sup> The weighted average cost per CYP for LARCs and short-acting methods is weighted by the users supported by each method for short-acting methods and LARCs.

<sup>7.</sup> Cost per CYP is calculated by multiplying units per CYP by unit price by method; CYP is calculated by method using the average USAID published CYP factors; Because there were several types of implants (3-, 4-, and 5-year) and injectables (1-, 2-, and 3-month), a weighted average CYP was calculated for implants and injectables using total volumes by product type; Unit price is based on the average USAID and UNFPA price as reported in UNFPA's 2013 Contraceptive Price Indicator; Cost of orals is the average of USAID and UNFPA prices via UNFPA's 2013 Price Indicator for combined, progestin-only, and emergency oral contraceptives; The price of implants is based on the Implant Access Program (IAP) price; Average units per CYP and unit costs presented are rounded.

## SEVEN COUNTRIES REPRESENTED HALF OF THE FP2020 MARKET VALUE IN 2013

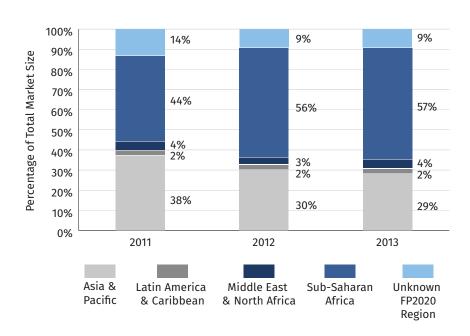
Bangladesh, Uganda, Ethiopia, Kenya, Pakistan, Zimbabwe, and Nigeria represented 50 percent of the total FP2020 market from 2011 to 2013.

From 2011 to 2013, total spending on family planning commodities across these seven countries averaged US\$160 million annually.

## The top 20 countries in terms of users exhibit wide variation in method mix.

In countries such as Egypt, Vietnam, India, Indonesia, Uzbekistan, and Tanzania, LARCs constituted the majority of the product-based method mix in 2013. In all of these countries except Tanzania, IUDs dominated purchase volumes. However, it is important to note that some of these countries may also procure nationally from suppliers that may not be participating in the FP2020 Global Markets Visibility Project. As a result, the analysis of users by method may not comprehensively reflect each country's product-based modern method mix.

#### **EXHIBIT 6: TOTAL FP2020 MARKET SHARE BY REGION<sup>9</sup>**



Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, December 2014; [3] UNFPA Contraceptive Price Indicator, 2011–2013; [4] PPMR Data, September 2014; [5] USAID, "Couple Years of Protection (CYP)," April 2014; [6] IAP Implant Price.

## EXHIBIT 7: TOP 7 COUNTRIES IN TERMS OF MARKET SIZE

## EXHIBIT 7: TOP MARKETS AND OTHER FP2020 MARKETS

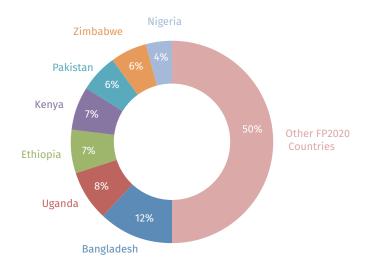
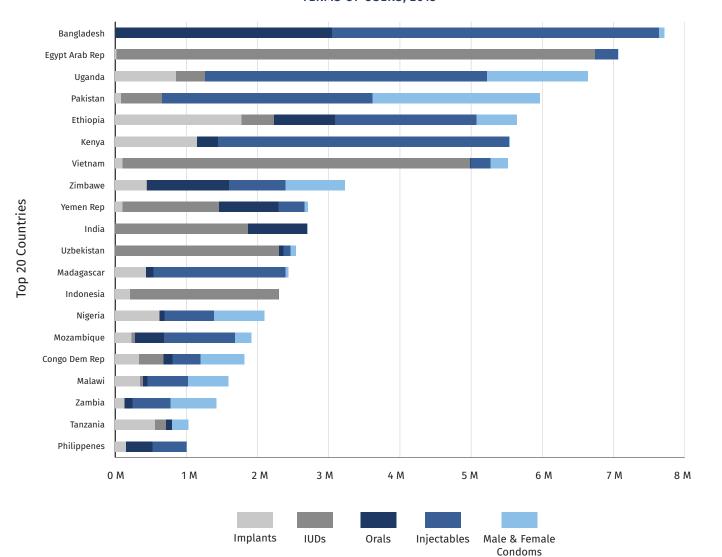




EXHIBIT 8: TOP 20 COUNTRIES IN TERMS OF USERS, 2013



# IN 2013, DONOR-FUNDED PROCUREMENTS SUPPORTED 65 MILLION WOMEN USING PRODUCT-BASED METHODS. USAID AND UNFPA, THE TWO MAJOR INSTITUTIONAL PROCURERS OF FAMILY PLANNING COMMODITIES IN LMICS, HAVE SHIFTED THEIR METHOD MIX IN FAVOR OF LARCS.

## In 2013, donor-funded procurements supported 65 million women using product-based modern methods, representing 73 percent of total users implied by the supplier-reported shipment data.

Based on donor-funded shipments reported into RHI, donors increased annual funding for commodities in the FP2020 countries from US\$171 million to US\$224 million from 2011 to 2012 and then decreased funding to US\$203 million in 2013. The decline in commodity funding between 2012 and 2013 corresponded with a reduction in implant prices and male condom purchase volumes.

## Donors have significantly increased total procurement of implants and female condoms.

Between 2011 and 2013, annual implant shipments to FP2020 69 countries have increased over 200 percent from 1.8 million to 6.0 million, resulting in an estimated 10.8 million women using donor-funded implants in 2013; annual female condom shipments have increased almost 50 percent from 17 million to 26 million from 2011 to 2013, resulting in over 200,000 women using female condoms. However, in 2013, 74 percent of donor commodity spend was on short-acting methods. Male condoms, injectables, and orals each represented approximately a quarter of the 2013 donor commodity spend.

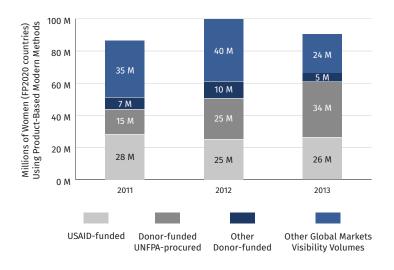
## While USAID has remained fairly stable in total users supported, UNFPA has more than doubled its commodity support in terms of users between 2011 and 2013.

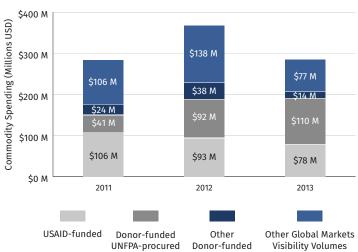
Relative to other procurers and donors, UNFPA has more than doubled its spending on commodities between 2011 and 2013. This increase in spending corresponds with an increase in commodity shipments and users supported by UNFPA across almost all methods.

## The purchasing patterns of USAID and UNFPA reveal a shift in method mix in favor of LARCs.

For USAID, the implied method mix of family planning procurements shows an increase in LARC share from 24 percent of users in 2011 to 31 percent in 2013, driven by increased funding for IUDs. For UNFPA, LARCs increased from 40 percent of the method mix in 2011 to 49 percent in 2013, driven by an increase in implant purchase volumes. The increase in the share of IUDs provided through USAID coincided with a decrease in the percentage of users receiving IUDs through UNFPA from 2011 to 2013

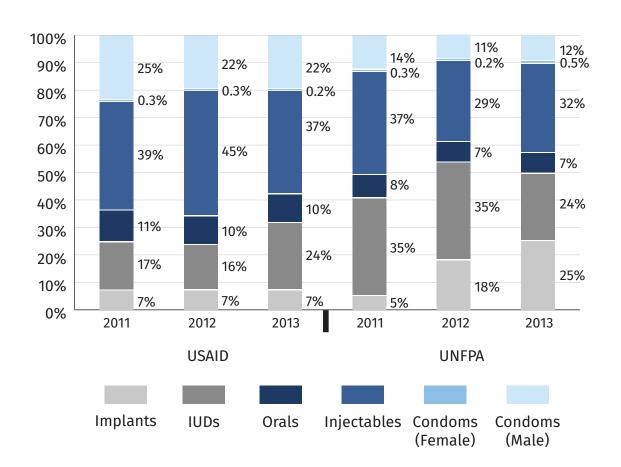
## EXHIBIT 9: KNOWN-DONOR-SUPPORTED USERS & COMMODITY COSTS





Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, December 2014; [3] UNFPA Contraceptive Price Indicator, 2011–2013; [4] PPMR Data, September 2014; [5] USAID, "Couple Years of Protection (CYP)," April 2014; [6] IAP Implant Price.

## EXHIBIT 10: USER METHOD MIX IMPLIED BY USAID & UNFPA PROCUREMENT



# THE FIRST LOOK AT SUPPLIER-PROVIDED SHIPMENT DATA SUGGESTS A SIGNIFICANT GAP BETWEEN FP2020 TARGETS AND PRODUCT SUPPLIED TO THE FP2020 COUNTRIES.

FP2020 has reported an increase in total women on modern methods from 265 million in 2012 to 274 million in 2013.10 If we assume that approximately 110 million of these women were using sterilization in both 2012 and 2013, then 155 million women in 2012 and 164 million women in 2013 were using product-based methods.11 However, the supplier-reported shipment data accounts for only half of total FP2020 estimated product-based users in 2012 and 2013. Additionally, the supplier-reported shipment data showed a drop in the total number of users based on purchases by institutional buyers and MOH/government-affiliated procurers over the same period.

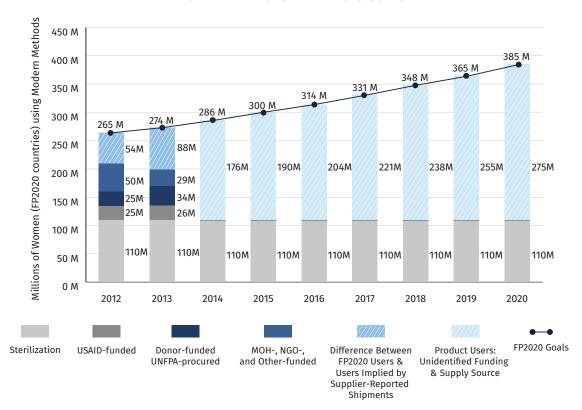
The discrepancy between total FP2020-reported users on product-based modern methods—which is derived from household survey data—and the estimates based on shipment data presents a challenge in measuring progress towards meeting the FP2020 goals.

CHAI is currently investigating the possible gaps in supplier-reported shipment data. Under-reporting of total shipments to FP2020 countries could stem from:

- Commercial sector sales from all suppliers participating in the FP2020 Global Markets Visibility Project, as the current supplier-reported data covers primarily public/NGO sector volumes
- National government procurements from domestic or regional manufacturers that do not supply to the international donor-funded markets

Support from NGOs, donors, and suppliers to improve FP2020 market visibility would enable the family planning community to better quantify progress and identify strategies to meet the goal of providing an additional 120 million women access to family planning products and services by 2020.

## EXHIBIT 11: MILLIONS OF WOMEN USING MODERN METHODS AND FP2020 GOALS<sup>12</sup>



Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, December 2014; [3] PPMR Data, September 2014; [5] USAID, "Couple Years of Protection (CYP)," April 2014; [6] FP2020 Progress Report, December 2014.

<sup>10.</sup> Family Planning 2020, "FP2020 Partnership in Progress, 2013–2014," November 2014, pp. 93, 100–101, 127; FP2020 updated 2012 estimates of total women on reproductive age on modern methods in the 69 FP2020 priority countries from 258 million to 265 million.

<sup>11.</sup> Family Planning 2020, "Technical Note: Data Sources and Methodology for Developing the 2012 Baseline, 2020 Objective, Impacts and Costings," June 2012, p. 10.

<sup>12.</sup> Sterilization does not have associated product costs but does have procedure costs. For 2012 and 2013, the sum of the individual stacked bars may differ slightly from total users due to rounding.

### FP2020 69 MARKET VOLUMES BY METHOD AND COUNTRY 2011-201313

COUNTRY	CONDOMS - FEMALE	CONDOMS - MALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan	2,000	19,572,826	-	1,395,200	67,000	807,674
Bangladesh	-	112,426,800	422,109	18,984,000	475,000	138,631,121
Benin	200,000	13,049,064	48,600	10,300	21,000	-
Bhutan	-	2,880,000	-	475,200	1,600	88,002
Bolivia	16,000	1,449,360	2,350	-	35,000	210,000
Burkina Faso	3,000	-	2,000	-	-	1,597,501
Burundi	400,000	14,053,200	44,600	-	39,000	33,335
Cambodia	-	1,764,000	19,000	-	20,000	-
Cameroon	1,602,000	-	11,500	-	31,000	50,200
Central African Republic	13,000	5,997,600	500	200	-	91,403
Chad	50,000	1,497,600	15,000	52,000	1,000	-
Comoros	-	1,008,000	1,024	26,800	100	-
Congo Dem Rep	2,200,000	70,999,800	8,500	350,000	26,000	1,295,595
Congo Rep	91,000	20,546,352	10	1,412,400	500	391,905
Cote d'Ivoire	291,000	34,676,400	-	630,800	10,000	2,613,145
Djibouti	20,000	570,240	-	-	1,500	-
Egypt Arab Rep	-	50,400	17,500	4,780,000	2,135,000	3,000,000
Eritrea	100,000	7,704,000	5,100	-	5,500	61,672
Ethiopia	-	146,223,384	382,704	5,471,200	420,000	7,752,440
Gambia	1,000	1,584,000	100	10,000	500	433,337
Ghana	-	4,197,000	57,674	3,044,000	-	-
Guinea	100,000	7,682,400	1,000	546,240	11,000	233,335
Guinea-Bissau	5,000	1,440,000	5,000	-	-	5,001
Haiti	-	54,534,096	-	976,800	-	200,001
Honduras	-	19,202,400	-	148,000	22,453	943,300
India	-	-	-	193,201	1,959,570	8,611,743
Indonesia	210,000	-	-	-	316,721	50,001
Iraq	-	-	-	-	75,000	2,625,000
Kenya	2,300,000	46,566,720	505,209	1,370,032	-	15,136,914
Korea Dem Rep	-	1,267,200	-	-	36,150	139,500
Kyrgyz Republic	-	5,169,600	-	-	160,000	-
Lao PDR	-	8,474,208	6,200	650,000	-	922,112
Lesotho	157,000	4,167,936	2,000	65,000	-	63,000
Liberia	100,000	22,048,800	3,000	423,200	-	-
Madagascar	144,000	23,710,800	124,318	1,913,600	4,500	280,000

COUNTRY	CONDOMS - FEMALE	CONDOMS - MALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Malawi	-	10,326,001	46,452	540,000	-	50,000
Mali	-	-	53,600	1,292,625	41,501	
Mauritania	20,000	3,600,000	3,728	6,000	5,500	533,336
Mongolia	25,000	9,992,880	1,000	-	-	321,000
Mozambique	1,004,000	95,394,000	5,010	1,241,400	41,000	5,393,262
Myanmar	340,000	56,184,712	4,000	-	-	6,659,699
Nepal	-	33,627,000	-	327,600	10,000	250,000
Nicaragua	-	13,356,000	-	332,100	50,000	842,001
Niger	-	-	4,612	814,000	2,800	400,000
Nigeria	1,232,000	78,269,652	32,900	3,157,500	209,000	1,055,335
Pakistan	-	249,421,800	25,300	5,862,000	200,000	400,299
Papua New Guinea	100,000	1,200,000	2,000	-	-	1,663,200
Philippines	-	640,800	-	-	-	6,639,745
Rwanda	51,000	30,211,488	-	1,768,400	18,600	
Sao Tome and Principe	6,000	2,181,600	-	852,075	200	47,129
Senegal	442,000	11,400,000	10,350	-	3,000	220,000
Sierra Leone	-	4,240,800	91,700	-	35,500	1,166,269
Solomon Islands	31,000	-	-	-	-	24,000
Somalia	-	-	-	-	-	
South Sudan	-	-	-	-	-	
Sri Lanka	-	777,600	10,000	-	80,000	2,125,000
Sudan	-	14,752,344	3,500	-	2,000	1,167,87
Tajikistan	15,000	10,095,072	5,440	-	150,000	
Tanzania	825,000	29,766,456	240,104	6,176,400	25,000	1,410,170
Timor-Leste	-	57,600	1,100	-	3,500	145,00
Togo	7,000	14,392,368	16,500	-	6,400	12,663
Uganda	1,607,000	82,119,600	86,688	2,089,800	83,785	303,040
Uzbekistan	35,000	5,414,112	-	-	1,500,000	600,000
Vietnam	-	15,000,000	9,000	1,180,000	1,772,000	
West Bank and Gaza	-	4,521,600	-	-	-	
Western Sahara	-	-	-	-	-	
Yemen Rep	-	829,440	6,625	2,001,875	30,000	3,971,12
Zambia	612,000	56,607,168	-	1,544,200	-	748,00
Zimbabwe	6,185,000	123,876,000	61,900	782,500	2,600	14,836,22
Other FP2020 Shipments	6,000	6,336,864	692,800	385,700	140,100	76,285,35

COUNTRY	CONDOMS - FEMALE	CONDOMS - MALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan Afghanistan	-	12,418,680	3,000	619,300	30,000	199,470
Bangladesh	-	26,736,000	512,800	18,562,000	515,000	146,646,964
Benin	40,000	21,606,400	16,500	-	19,000	-
Bhutan	2,000	3,456,000	-	70,000	-	97,899
Bolivia	35,000	-	25,300	-	6,000	3,000
Burkina Faso	2,000	16,741,200	117,100	1,369,900	16,500	2,348,935
Burundi	160,000	5,652,000	120,000	996,000	175,000	608,160
Cambodia	3,000	748,656	29,676	307,600	58,650	1,097,838
Cameroon	410,000	3,162,000	12,300	-	20,000	17,840
Central African Republic	332,000	3,002,400	13,600	198,400	1,000	1,031,664
Chad	-	-	25,800	30,000	3,000	-
Comoros	12,000	-	500	15,000	-	17,199
Congo Dem Rep	4,230,000	146,577,600	46,800	1,344,000	39,000	4,210,965
Congo Rep	156,000	6,998,400	300	800,000	-	-
Cote d'Ivoire	400,000	37,080,000	16,456	700,000	-	2,455,000
Djibouti	5,000	499,680	-	-	500	96,000
Egypt Arab Rep	-	2,185,920	45,000	5,000,000	338,000	4,746,366
Eritrea	-	-	100	-	-	21,600
Ethiopia	10,000	173,877,714	1,471,188	16,429,200	257,200	8,545,593
Gambia	-	-	5,000	1,000	-	24,000
Ghana	-	7,605,000	196,460	2,172,000	-	120,000
Guinea	201,000	4,328,640	7,000	713,000	2,600	1,650,800
Guinea-Bissau	-	720,000	10,000	14,000	22,000	4,641
Haiti	-	69,799,680	6,000	1,607,200	1,000	346,560
Honduras	-	9,772,992	-	691,900	19,400	1,810,800
India	-	-	-	134,494	2,973,600	5,750,000
Indonesia	250,000	-	-	-	588,850	-
Iraq	-	-	-	-	-	3,252,000
Kenya	-	150,768,000	176,556	9,631,025	25,000	4,503,281
Korea Dem Rep	-	2,592,000	-	51,000	30,000	351,999
Kyrgyz Republic	399,000	26,236,800	-	5,600	255,000	482,880
Lao PDR	10,000	2,865,600	1,600	605,000	13,000	2,676,480
Lesotho	204,000	1,699,200	-	110,000	-	-
Liberia	-	6,186,945	18,000	-	-	4,860
Madagascar	515,000	3,002,400	174,336	2,896,200	-	2,861,680
Malawi	2,910,000	19,656,960	182,744	4,922,400	6,000	125,791
Mali	24,000	6,433,920	55,000	168,800	18,000	2,314,375
Mauritania	-	-	-	13,400	-	-
Mongolia	10,000	6,048,000	5,120	120,000	-	652,797
Mozambique	1,500,000	96,978,960	30,000	2,490,000	-	6,419,170
Myanmar	365,000	9,440,112	-	1,501,600	18,000	6,705,458
Nepal	15,000	66,400,720	88,000	237,600	104,600	-
Nicaragua	-	4,229,280	-	450,400	11,896	822,055
Niger	-	14,400	3,108	200,600	10,000	740,850

COUNTRY	CONDOMS - FEMALE	CONDOMS - MALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Nigeria	677,000	199,169,440	328,212	14,321,300	872,634	2,235,777
Pakistan	10,000	252,501,000	70,768	857,600	90,700	226,701
Papua New Guinea	300,000	-	26,500	800,000	600	6,335
Philippines	100,000	2,001,600	1,536	200,000	447,514	14,565,234
Rwanda	-	15,674,568	20,060	776,400	-	105,000
Sao Tome and Principe	11,000	1,677,600	6,100	15,000	5,000	125,400
Senegal	-	13,965,000	77,056	1,478,400	14,000	1,002
Sierra Leone	278,000	1,119,000	-	250,000	15,990	739,073
Solomon Islands	-	-	-	-	-	-
Somalia	-	-	2,000	-	-	20,000
South Sudan	-	-	5,004	-	-	-
Sri Lanka	2,000	-	74,800	250,000	1,800	2,060,000
Sudan	-	5,635,968	25,040	-	9,000	3,968,200
Tajikistan	10,000	1,785,600	-	41,500	140,000	432,480
Tanzania	1,408,000	51,724,408	351,500	4,155,900	47,000	2,105,540
Timor-Leste	-	2,592,000	5,450	-	2,000	128,571
Togo	10,000	42,885,408	26,000	322,400	-	27,000
Uganda	-	87,214,536	396,829	6,249,200	76,896	99,400
Uzbekistan	-	3,600,000	-	445,000	800,000	1,121,280
Vietnam	49,000	52,546,800	23,976	900,000	800,000	138,999
West Bank and Gaza	-	-	-	-	-	-
Western Sahara	-	-	-	-	-	-
Yemen Rep	-	3,801,888	24,000	180,000	95,000	3,443,504
Zambia	2,217,000	38,674,440	38,300	2,010,800	-	1,655,200
Zimbabwe	1,696,000	94,452,000	113,600	634,200	6,050	14,254,948
Other FP2020 Shipments	146,000	14,839,200	721,200	10,000	77,400	68,012,790

COUNTRY	CONDOMS - FEMALE	CONDOMS - MALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Afghanistan	5,000	23,181,600	-	1,550,000	-	17,001
Bangladesh	5,000	10,102,800	-	14,200,000	-	76,298,840
Benin	64,000	6,580,800	44,200	32,400	32,000	180,000
Bhutan	-	295,200	-	-	2,000	126,420
Bolivia	125,000	3,335,760	34,500	500,000	70,000	429,840
Burkina Faso	-	1,411,200	257,196	215,650	28,000	565,200
Burundi	-	20,833	-	1,000,000	-	574,080
Cambodia	-	2,160,000	51,399	-	2,000	4,300,008
Cameroon	1,600,000	-	30,300	12,800	57,659	1,494,720
Central African Republic	582,000	10,036,800	6,000	183,000	1,500	1,003,797
Chad	150,000	1,267,200	44,100	628,400	13,000	2,701,920
Comoros	-	1,252,800	1,600	93,300	500	48,720
Congo Dem Rep	2,349,000	79,405,344	187,168	1,219,300	118,000	2,384,472
Congo Rep	150,000	-	800	273,500	500	2,457,988
Cote d'Ivoire	100,000	18,316,800	14,000	240,000	2,500	4,584,370
Djibouti	5,000	2,268,000	-	7,600	500	8,640
Egypt Arab Rep	-	100,800	10,801	1,000,164	2,340,100	-
Eritrea	-	-	600	-	-	50,400
Ethiopia	50,000	75,766,296	981,740	6,159,396	160,000	15,082,178
Gambia	10,000	1,000,800	5,000	110,000	-	253,160
Ghana	-	34,302,000	144,348	1,025,500	10,000	451,280
Guinea	20,000	9,050,400	13,000	-	4,000	-
Guinea-Bissau	17,000	1,749,600	21,400	20,600	5,500	42,840
Haiti	-	51,940,800	1,700	1,646,400	2,000	223,920
Honduras	3,000	11,505,600	5,056	670,000	-	1,879,920
India	-	-	-	18,260	650,800	17,671,399
Indonesia	-	-	113,500	-	727,409	-
Iraq	-	-	-	-	-	3,000,000
Kenya	776,000	345,600	635,043	12,635,755	1,250	6,269,302
Korea Dem Rep	-	2,462,400	-	-	15,000	96,000
Kyrgyz Republic	-	5,299,200	-	15,000	-	570,300
Lao PDR	-	655,200	-	279,200	5,000	178,962
Lesotho	200,000	13,392,000	100	120,000	15,000	238,800
Liberia	71,000	17,400,000	15,200	244,800	-	400,320
Madagascar	583,000	4,398,768	239,980	5,733,542	-	2,326,960
Malawi	975,000	74,491,080	193,048	1,742,327	15,610	1,590,523
Mali	11,000	20,041,008	87,700	1,197,198	-	
Mauritania	15,000	12,528,000	5,120	156,700	-	726,480
Mongolia	5,000	4,608,152	17,744	80,000	35,000	435,482
Mozambique	1,300,000	29,528,579	127,000	3,072,000	16,000	8,425,200
Myanmar	305,000	5,119,032	40.000	821,000	23,000	10,112,399
Nepal	13,000	6,362,288	10,000	655,200	30,000	4.001.015
Nicaragua	-	4,003,200	300	339,000	7,500	1,094,813
Niger	64,000	3,384,000	90,016	503,400	-	3,183,760

COUNTRY	CONDOMS - FEMALE	CONDOMS - MALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Nigeria	5,116,000	88,466,740	344,663	2,142,300	-	1,803,072
Pakistan	-	315,867,000	45,492	9,151,200	200,400	-
Papua New Guinea	-	19,324,800	38,790	-	4,000	1,313,583
Philippines	10,000	-	85,056	1,485,000	-	9,331,385
Rwanda	72,000	14,082,000	27,000	928,000	-	1,477,200
Sao Tome and Principe	8,000	-	500	-	-	6,000
Senegal	93,000	9,943,200	-	1,159,000	26,000	-
Sierra Leone	16,000	11,119,800	36,600	733,000	18,000	1,652,870
Solomon Islands	72,000	-	-	-	500	-
Somalia	-	-	1,000	-	-	148,700
South Sudan	-	-	10,940	-	500	775,200
Sri Lanka	-	-	93,000	233,500	110,000	2,000,000
Sudan	60,000	10,890,600	30,572	-	-	2,456,292
Tajikistan	-	7,081,200	-	-	105,000	-
Tanzania	1,178,000	28,944,000	309,621	-	55,000	2,009,270
Timor-Leste	-	57,600	2,100	-	-	225,863
Togo	113,000	11,294,400	68,000	606,500	-	108,960
Uganda	5,400,000	183,991,800	471,635	12,243,775	143,000	-
Uzbekistan	-	9,518,400	-	300,000	800,000	1,367,760
Vietnam	500,000	31,968,000	56,136	870,000	1,700,000	71,665
West Bank and Gaza	2,000	3,998,304	-	-	-	-
Western Sahara	-	-	-	-	-	-
Yemen Rep	-	6,082,704	56,192	1,126,284	471,459	17,423,472
Zambia	500,000	85,809,000	75,000	1,656,900	-	2,669,480
Zimbabwe	4,429,000	106,257,000	244,180	2,460,400	3,500	24,101,441
Other FP2020 Shipments	1,036,000	148,903,200	678,000	251,400	79,630	45,132,570

#### APPENDIX B — DATA SOURCES

Prior to the development of market analyses, CHAI reviewed various data sources from partner organizations that provide family planning market data at the global level. CHAI assessed these databases based on available metrics, coverage of countries, frequency of updates, and ease of access to identify the most appropriate sources for sustainable analyses, with the ability to be updated as new data became available. The following provides an overview of the data sources CHAI relied upon for market analyses:

#### Procurement Planning and Monitoring Report (PPMR): 14

Produced monthly by the USAID | DELIVER Project, this online database provides information on consumption and current/desired stock levels of contraceptive products on a country-by-country basis for 33 countries. Data is provided by ministries of health or USAID partners (Abt Associates, USAID | DELIVER Project), SMOs (MSI, PSI), and UNFPA.

#### Reproductive Health Interchange (RHI): 15

Hosted by UNFPA, RHI collects data on past and upcoming contraceptive shipments for over 140 countries from the central procurement offices of major contraceptive donors and procurers. This database is updated at variable times that depend on the frequency of data submissions from the data provider. RHI reflects all of UNFPA's and USAID's contraceptive purchases, MSI's and IPPF's central procurements, and a few other procuring organizations' purchases.

#### **FP2020 Global Markets Visibility Project:**

In early 2014, CHAI, in partnership with RHSC and the FP2020 Market Dynamics Working Group, launched the Global Markets Visibility Project to help various donors, suppliers, and partners improve their understanding of the current market size and trends for key contraceptive markets. CHAI signed MOUs with six contraceptive manufacturers and received historical shipment data by product and country for each of the FP2020 69 priority countries. CHAI has partnered with Concept Foundation to collect and aggregate shipment data from participating members of the RHSC Generic Manufacturers for Reproductive Health Caucus (GEMs). Additionally, CHAI recently signed an MOU with i\*solutions to collect historical shipment data from female condom manufacturers. To date, the Global Markets Visibility Project has collected historical shipment data that covers institutional sales (USAID, UNFPA, MSI, etc.) and MOH tender volumes from 11 manufacturers across five family planning product categories.

The FP2020 market size was constructed using the best available data sources: historical supplier-reported shipment data and RHI shipment data. The historical supplier-reported shipment data captured a more comprehensive view of the FP2020 market for implants, injectables, IUDs, and orals relative to RHI and thus, served as the primary data source for these product markets. Because the RHI shipment data had greater coverage of the male condom market relative to the historical supplier-reported data, RHI data was relied upon for the male condom volumes. The female condom market was constructed based on supplier- (Cupid) and procurer-reported (i\*solutions) shipment data and supplemented with RHI shipment volumes for suppliers not participating in the FP2020 Global Markets Visibility Project. The data is quantified by units of measure outlined in Exhibit A.4.

The following section describes the data source and market size estimation in more detail.

#### **Historical Supplier-Reported Data**

In early 2014, CHAI, in conjunction with RHSC and the FP2020 Market Dynamics Working Group, launched the Global Markets Visibility Project to help various donors, suppliers, and partners improve their understanding of the current market size and trends for key contraceptive markets. CHAI signed MOUs with six contraceptive manufacturers and received historical shipment data by product and country for each of the FP2020 69 priority countries. CHAI also partnered with Concept Foundation to collect and aggregate shipment data from participating members of the RHSC Generic Manufacturers for Reproductive Health Caucus (GEMs). Additionally, CHAI and i solutions established a partnership in late 2014 to collect shipment data from female condom manufacturers.

To date, the Global Markets Visibility Project has collected historical supplier-reported shipment data from 11 manufacturers – Bayer, CR Zizhu, Cupid, Famy Care, Helm-Fresenius, Merck/MSD, Pfizer, Pregna, PT Tunggal, Shanghai Dahua, and SMB. Collectively, the total volumes cover institutional sales (USAID, UNFPA, MSI, etc.) and MOH tenders across five family planning product categories.<sup>16</sup>

EXHIBIT A.4: UNIT OF MEASUREMENT				
METHOD	UNITS PER CYP			
Condoms - Female	Piece			
Condoms - Male	Piece			
Implants	Set			
Injectables	Vial			
IUDs	Piece			
Orals - Combined	Cycle			
Orals - Progestin Only	Cycle			
Orals - Emergency	Doses			

MANUFACTURER	CONDOMS - FEMALE	IMPLANTS	INJECTABLES	IUDS	ORALS
Bayer		•	•		•
CR Zizhu					•
Cupid	•				
Famy Care			•	•	•
Helm-Fresenius			•		
Merck/MSD		•			•
Pfizer			•		
Pregna				•	
PT Tunggal			•		•
Shanghai Dahua		•			
SMB				•	

Aggregating across implants, injectables, IUDs, and orals in the FP2020 69 countries and methods, suppliers have shipped an average of 415 million units of family planning commodities annually from 2011 to 2013.<sup>17</sup>

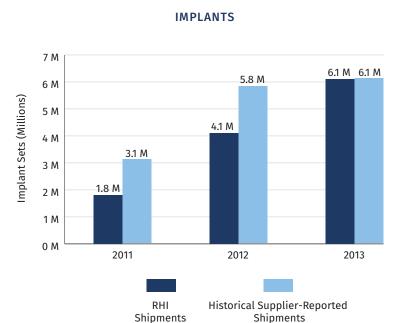
Because Cupid is currently the only supplier reporting historical shipments of female condoms, total female condom shipments have been excluded in the below table to ensure confidentiality of individual supplier shipment data. It is also important to note that there were several shipments to procurer (USAID, UNFPA, SMOs) warehouses in non-FP2020 countries, such as Denmark, Netherlands, Switzerland, UK, and US. Although these volumes were shipped to non-FP2020 countries, the end shipment destination of these volumes would likely be the FP2020 69. As a result, these non-FP2020 69 volumes were included in the total shipments to FP2020 69 countries after it was confirmed that the specific non-FP2020 69 volumes were associated with institutional purchases.

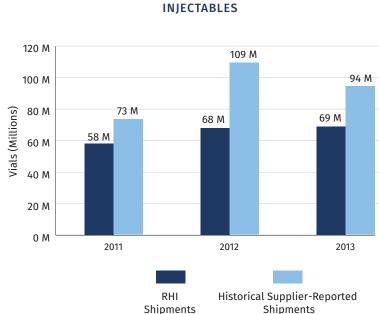
CHAI analyzed and assessed the aggregated historical supplier-reported shipment data to confirm the coverage across various FP2020 product markets was greater relative to RHI shipment data for the FP2020 69 countries. The aim of collecting historical volumes of all institutional purchases and MOH tenders directly from suppliers was to address data gaps observed in RHI shipment data which only captures a subset of procurers who choose to submit historical procurement data. Further, although some countries report national procurements, most national procurements are not reported into the RHI database. When compared to RHI, the total historical supplier-reported shipment volumes to FP2020 69 countries and procurer warehouses is consistently greater than RHI volumes across four family planning methods—implants, injectables, IUDs, and orals. Thus, for these product markets, the supplier-reported shipment data captures a more comprehensive view of the family planning market in the FP2020 69.

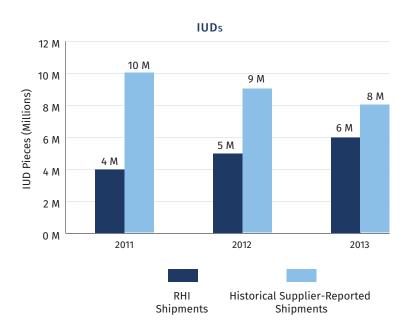
EXHIBIT A.6: SUPPLIER-REPORTED SHIPMENTS TO FP2020 COUNTRIES BY METHOD, 2011–2013					
METHOD	2011	2012	2013		
Implants	3.1 M	5.8 M	6.1 M		
Injectables	73.3 M	109.1 M	93.7 M		
IUDs	10.3 M	9.1 M	8.1 M		
Orals	313.5 M	329.2 M	285.6 M		
Total	400.2 M	453.1 M	393.5 M		

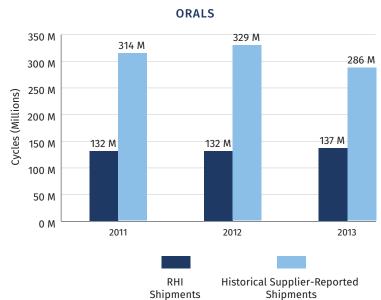
Source: [1] Historical Supplier-Reported Shipment Data.

## EXHIBIT A.7: RHI VS SUPPLIER-REPORTED SHIPMENTS TO FP2020 COUNTRIES BY METHOD, 2011-2013









Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, December 2014.

#### Female and Male Condom Market

Because CHAI has not yet received data from male condom suppliers, historical RHI shipment data for male condoms is used to capture a more comprehensive view of the family planning market for the FP2020 69 countries. We use RHI shipment data from 2011 to 2013 and include all male condom shipments to FP2020 69 countries as well as volumes associated with procurer warehouses in non-FP2020 69 countries.<sup>19</sup> The male condom market reflected by the RHI data includes 18 manufacturers and funding sources.<sup>19</sup>

We constructed the female condom market using both shipment data collected as part of the FP2020 Global Markets Visibility Project and shipment data from RHI. From the FP2020 Global Markets Visibility Project, CHAI has received shipment data from Cupid and shipment data associated with Universal Access for Female Condom (UAFC) Joint Programme procurements from i'solutions. The female condom procurement volumes associated with the UAFC Joint Programme have not been reported into RHI. Because CHAI has not yet received data from other major female condom manufacturers, historical RHI shipment data for female condoms is supplemented for other manufacturers.

The historical supplier-reported volumes for female condoms, implants, injectables, IUDs, and orals, together with RHI shipment volumes for female and male condoms, represent the estimated FP2020 market from 2011 to 2013.

EXHIBIT A.8: RHI MALE CONDOM SHIPMENTS, 2011–2013					
METHOD	2011	2012	2013		
Condoms - Male	1,619.1 M	1,841.4 M	1,642.7 M		

EXHIBIT A.9: FEMALE CONDOM SHIPMENTS, 2011–2013			
SOURCE	2011	2012	2013
FP2020 Global Markets Visibil- ity Project	3.0 M	1.1 M	0.8 M
RHI Shipment Data	17.5 M	18.0 M	27.3 M
Total	20.5 M	19.1 M	28.2 M

EXHIBIT A.10: FP2020 69 CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2011–2013			
METHOD	2011	2012	2013
Condoms – Female (RHI & Supplier- Reported)	20.5 M	19.1 M	28.2 M
Condoms – Male (RHI)	1,619.1 M	1,841.4 M	1,642.7 M
Implants	3.1 M	5.8 M	6.1 M
Injectables	73.3 M	109.1 M	93.7 M
IUDs	10.3 M	9.1 M	8.1 M
Orals	313.5 M	329.2 M	285.6 M
Total	2,039.9 M	2,313.6 M	2,064.3 M

Source: [Exhibit A.8] RHI Shipment Data, December 2014. Source: [Exhibit A.9] Historical Supplier-Reported Shipment Data; RHI Shipment Data, December 2014. Source: [Exhibit A.10] Historical Supplier-Reported Shipment Data; RHI Shipment Data, December 2014.

#### **Total FP2020 Market In Terms of Users**

CHAI translated shipments to users by estimating the volumes consumed and converting to users based on a CYP factor. First, shipments are converted to consumption using a method-specific consumption-to-shipment conversion based on the ratio of 2013 consumption (via PPMR) to shipments (via RHI). Using consumption and shipment data for countries reporting into both the PPMR and RHI databases, a ratio between total 2013 consumption and shipments is calculated by method. Next, we estimate users by dividing consumption by the corresponding CYP factor published by USAID. CYP is the estimated the protection provided by contraceptive methods during a one-year period based upon the volume of all methods sold or distributed for free to clients during that period of time.<sup>20</sup> Because implants and injectables have different CYPs associated with different sub-types (e.g. there are different CYP factors for 3-, 4-, and 5-year implants), a weighted average is calculated based on volumes. The following exhibit shows the conversion factors used to translate volumes to users.

#### **Total FP2020 Market Size**

The total value of contraceptives is calculated by applying average unit prices to total shipment volumes. Average unit prices by method and year are based on the average price between USAID and UNFPA as reported in UNFPA's Contraceptive Price Indicator. Although there are different prices for different products and markets, we estimate implied spend using UNFPA's Contraceptive Price Indicator prices for simplicity. Finally, the Implant Access Program price of US\$8.50 is applied to implant volumes in 2013. The average price only includes the cost of the product and does not account for additional costs associated with procurement such as testing, insurance, and shipping costs.

EXHIBIT A.11: VOLUMES TO USERS CONVERSION FACTORS			
METHOD	CONSUMPTION TO SHIPMENT	UNITS PER COUPLE YEARS OF PROTECTION	
Condoms - Female	0.9	120.0	
Condoms - Male	1.1	120.0	
Implants	1.7	0.3	
Injectables	0.8	4.1	
IUDs	1.6	0.2	
Orals - Combined	1.7	15.0	
Orals - Progestin Only	1.2	15.0	
Orals - Emergency	0.3	20.0	

EXHIBIT A.12: AVERAGE UNIT PRICE (USD)					
	PRICE RANGE		2011	2012	2013
Method	Minimum	Maximum	Unit Price	Unit Price	Unit Price
Condoms - Female	\$0.51	\$0.57	\$0.56	\$0.55	\$0.54
Condoms - Male	\$0.02	\$0.03	\$0.03	\$0.03	\$0.03
Implants	\$8.50	\$20.86	\$18.65	\$17.98	\$8.50
Injectables	\$0.64	\$1.34	\$0.82	\$0.82	\$0.83
IUDs	\$0.32	\$0.54	\$0.43	\$0.43	\$0.43
Orals - Combined	\$0.27	\$0.70	\$0.31	\$0.30	\$0.28
Orals - Progestin Only	\$0.30	\$0.42	\$0.32	\$0.32	\$0.31
Orals - Emergency	\$0.25	\$0.70	\$0.34	\$0.49	\$0.44

Sources: [Exhibit A.11] [1] PPMR Data, December 2014; [2] RHI Shipment Data, December 2014; [3] USAID, "Couple Years of Protection (CYP)," April 2014. [Exhibit A.12] Notes: [1] For implants, the Implant Access Program price is used; [2] The range and average unit price in each corresponding is based on average USAID and UNFPA prices via UNFPA's Contraceptive Price Indicators; [3] The average price of all oral contraceptives is calculated by taking the average of combined, progestin-only, and emergency oral contraceptives. Sources: [1] UNFPA Contraceptive Price Indicator, 2011–2013; [2] IAP Implant Price.

### APPENDIX D — ESTIMATING TOTAL KNOWN FP2020 DONOR-FUNDED VOLUME

To protect customer confidentiality, suppliers were not asked to disclose customer information associated with shipments. Instead, CHAI relied upon RHI to estimate the known donor-funded volumes and in turn, users and costs. RHI data contains shipment data reported by central procurement offices of major contraceptive orders and other organizations that procure contraceptives. This includes organizations such as IPPF, MSI, PSI, USAID, and UNFPA. From 2011 to 2013, the following funding sources are associated with shipments to FP2020 69 countries and shipments to procurer warehouses that are reported into RHI:

For the purposes of this analysis, national procurements identified as "OTHERGOV" and "MOH" as well as unknown funding sources identified as "OTHER" have been excluded. These may include volumes associated with UNFPA third party procurements or SMOs procurements using unidentified funding sources. It is important to note that RHI only includes data for procurement agencies that are data providers. There may be other donor-funded procurements that are not reported into RHI.

EXHIBIT A.13: FP2020 FUNDING SOURCES REPORTING TO RHI, 2011–2013			
FUNDING SOURCES			
AFDB	KFW	UNFPA	
BMGF	МОН	UNPEACE	
CDC	MSI	USAID	
DFID	NETHERLANDS	USDOD	
DKT	OTHER	WORLDBANK	
GLOBALFUND	OTHERGOV		
ICA	PSI		
IPPF	UNDP		