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**ANNUAL FORECASTS OF PRODUCTION AND CONSUMPTION AND ESTIMATES OF  
PRODUCTION LEVELS TO ACHIEVE EQUILIBRIUM IN THE WORLD COCOA MARKET**



## EXECUTIVE SUMMARY

1. This document presents an evaluation of developments in the world cocoa market from 2007/2008 to 2012/2013. The market assessments are based on a set of projections that are conditional on specific assumptions regarding macroeconomic conditions (GDP growth, inflation and developments in foreign currency markets) as well as production technologies (yields of cocoa trees). It also assumes average weather conditions. Using the underlying assumptions, the document on “*Annual Forecasts of Production and Consumption and Estimates of Production Levels to Achieve Equilibrium in the World Cocoa Market*” presents a plausible scenario for the evolution of the world cocoa market over the next five years.

2. Current projections are set against a backdrop of a slowdown of global economic growth and relatively high cocoa prices. For the current cocoa year, world production is projected to increase from around 3.7 million tonnes in 2007/2008 to about 4.5 million tonnes in 2012/13, increasing at an estimated average growth rate of nearly 3.7% *per annum*.

3. World grindings are expected to rise from almost 3.7 million tonnes in 2007/2008 to 4.3 million tonnes in 2012/2013, increasing at an estimated average growth rate of nearly 2.8% *per annum*.

4. As a result of the projected developments in world production and grindings, end-of-season stock levels are expected to increase from nearly 1.54 million tonnes in 2007/2008 to 2.13 million tonnes in 2012/2013. Consequently, the world stocks-to-grindings ratio is expected to increase from 41% at the end of the current season to 50% at the end of the projection period.

5. Related to the projections of the stocks-to-grindings ratio, cocoa prices in real terms are expected to increase to 1,446 SDR (£1,143 or \$US 2,298) per tonne in 2008/2009. Subsequently, prices are expected to decline gradually to 1,257 SDR per tonne in 2012/2013 because of the increase in the stocks-to-grindings ratio.

## ANNUAL FORECASTS OF PRODUCTION AND CONSUMPTION AND ESTIMATES OF PRODUCTION LEVELS TO ACHIEVE EQUILIBRIUM IN THE WORLD COCOA MARKET

### INTRODUCTION

6. This document has been prepared for consideration by the Executive Committee, in compliance with Article 34 of the International Cocoa Agreement, 2001. Forecasts of world production and consumption contained in document MC/11/3 of 5 July 2007 were last prepared by the Secretariat and submitted to the Market Committee for consideration at its eleventh meeting held in London in September 2007. This document represents an update of the previously submitted document, utilizing information received by the Secretariat since preparation of the earlier document.

7. Annual forecasts have been generated, taking into consideration the full interaction among the various fundamental factors operating in the market. The analysis has been made, not only of projected levels of production and consumption, but also of variations in world stock levels and the consequent impact on the expected evolution of world cocoa prices.

8. The previous analysis indicated a growth in world cocoa production of 2.1% *per annum* between the 2007/2008 and 2011/2012 seasons. World grindings were projected to grow at an average rate of 3.4% *per annum* between the 2007/2008 and 2011/2012 seasons. The prospect of economic growth across the major consuming countries was the principal factor fuelling the demand for grindings. Finally, prices were expected to decline to a minimum of 1,153 SDR per tonne in 2009/2010 and to recover thereafter.

9. The new forecasts described below have been obtained by re-estimating the ICCO econometric model and by incorporating the latest information available at the time of writing. The final year of the projection period is 2012/2013, in compliance with the International Cocoa Agreement 2001, which requires projections up to five years ahead.

### PROJECTIONS FOR THE WORLD COCOA ECONOMY TO 2012/2013

10. A summary of the revised global forecasts generated by the analysis through to the cocoa year 2012/13 is provided in **Table 1**, which also includes data on the recent evolution of the world cocoa market from 2002/2003 through to the current year. World production is projected to rise from around 3.7 million tonnes in 2007/2008 to about 4.5 million tonnes in 2012/2013, increasing at an estimated rate of growth of 3.7% *per annum*. Compared to the previous ICCO exercise, the rate of growth has been revised upward by 1.6 percentage points. The expected developments in world cocoa prices are the major factors fuelling acceleration in the growth rate of world cocoa production.

11. World grindings are expected to rise from around 3.7 million tonnes in 2007/2008 to nearly 4.3 million tonnes in 2012/2013, increasing at an estimated average growth rate of 2.8% *per annum*. Compared to the previous econometric exercise, the rate of growth of world grindings is down 0.6 percentage points. The slowdown of the world economy and the relative high levels of cocoa prices are the main factors behind this revision. However, if a recession hits the US economy, a further decline in the rate of growth of world grindings could be expected.

12. As a result of the projected developments in world production and grindings, end-of-season stock levels are expected to increase from nearly 1.54 million tonnes in 2007/2008 to 2.13 million tonnes in 2012/2013. Consequently, the world stocks-to-grindings ratio is expected to increase during the projection period, reaching a maximum of 50% in the 2012/2013 season.

13. Related to the projections of the stocks-to-grindings ratio, cocoa prices in real terms are expected to increase to 1,446 SDR (£ 1,143 or \$US 2,298) per tonne in 2008/2009. Subsequently, prices are expected to decline gradually from 1,414 SDR per tonne in 2009/2010 to 1,257 SDR per tonne in 2012/2013, as a result of the increase in the stocks-to-grindings ratio. Related to the projections of volumes and prices, the annual market value of world cocoa production is expected to increase at an average rate of 1.9% *per annum* in real terms between the 2007/2008 and 2012/2013 seasons.

14. A graphical representation of the results with regard to developments of world production, consumption, end-of-season stock levels, the world stocks-to-grindings ratio, and average annual cocoa prices in constant 2006/2007 terms is shown in **Charts 1 to 5**, respectively. In these charts, the bold lines represent the actual, estimated or forecast trends, up to and including the current 2007/2008 cocoa year and the average projections of their future levels for subsequent years. To facilitate a comparison of the present projections with the previous ones, the dotted lines in the charts indicate the corresponding estimates and median projections of the previous analysis.

15. With regard to the developments in world production, discrepancies are observed between the current and previous exercises. These differences are due to bullish developments in cocoa prices. Concerning the developments in world grindings, the Secretariat has revised upward the forecast for the current cocoa year by nearly three per cent. However, this increase is expected to disappear over the projection period because of the downward revision in the growth of the world economy and the recent increases in cocoa prices.

16. **Table 2** provides the expected levels of production for regions and individual countries which make up the total expected level of world production. At a regional level, production from Africa continues to provide the bulk of world supplies, accounting for more than two thirds of world production in the 2006/2007 season. Current forecasts indicate that its share is expected to increase slightly during the projection period from 69% in the 2007/2008 cocoa year to 70% in 2012/2013. On the other hand, the contributions from both the Americas and Asia/Oceania are expected to be stable during the projection period, at around 12% and 19% respectively.

17. Amongst individual countries, Côte d'Ivoire remains by far the largest cocoa producer, contributing nearly 37% of world cocoa supplies. During the projection period, its share is expected to decline slightly from 36.9% to 36.7%. This is because the average growth of its output is marginally lower than the average growth rate of world production. The Ghanaian contribution to world cocoa production is expected to rise from 18.2% in 2007/2008 to 19.8% in 2012/2013. The world share of Cameroon is expected to decline from 5.0% to 4.6% over the same period.

## **PRODUCTION LEVELS TO ACHIEVE EQUILIBRIUM IN THE WORLD COCOA MARKET**

18. It is recalled that, under the International Cocoa Agreement, 1993, the Production Committee established a normative target to achieve and maintain a stocks-to-grindings ratio of 34% to achieve a balanced situation in the world cocoa market.

19. Simulations have been made, which gradually reduce the stocks-to-grindings ratio from its present level of 41% to 34% in 2012/2013. The results are contained in **Table 3**. The analysis indicates that an average reduction in production of 284,000 tonnes *per annum* is required to achieve the target 34% ratio in 2012/2013. As a result, the value of world production would be expected to increase by nearly 12% *per annum* on average during the projection period.

TABLE 1. RECENT DEVELOPMENTS IN THE WORLD COCOA MARKET AND FORECASTS THROUGH TO 2012/13

1000 tonnes	Estimates					Forecasts	Projections				
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13
<b>SUPPLY AND DEMAND</b>											
<b>World production gross</b>											
Estimates/forecasts/medians	3169	3537	3377	3759	3376	3713	3915	4076	4193	4324	4459
<b>World grindings,</b>											
Estimates/forecasts/medians	3079	3238	3354	3506	3641	3727	3805	3900	4024	4154	4285
<b>WORLD COCOA STOCKS</b>											
<b>End-of-season stock levels</b>											
Estimates/forecasts/medians	1405	1682	1671	1886	1587	1536	1607	1742	1869	1995	2125
<b>Surplus/Deficit</b>											
Estimates/forecasts/medians	69	277	-11	215	-299	-51	71	135	126	127	129
<b>Stocks-to-grindings ratio (%)</b>											
Estimates/forecasts/medians	46%	52%	50%	54%	44%	41%	42%	45%	46%	48%	50%
<b>COCOA PRICES</b>											
<b>Average crop year price</b>											
Estimates/forecasts/medians SDR/tonnes	1369	1047	1049	1068	1226	1406	1512	1510	1465	1443	1427
Estimates/forecasts/medians SDR/tonnes (2007/2008)	1508	1132	1106	1092	1226	1374	1446	1414	1343	1297	1257

**TABLE 2. FORECASTS OF NATIONAL AND REGIONAL COCOA PRODUCTION THROUGH TO 2012/13**

1000 tonnes	Estimates					Forecasts	Projections				
	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
<b>Africa</b>	<b>2231</b>	<b>2550</b>	<b>2375</b>	<b>2643</b>	<b>2334</b>	<b>2578</b>	<b>2709</b>	<b>2815</b>	<b>2894</b>	<b>2999</b>	<b>3117</b>
Cameroon	160	166	185	166	166	185	191	196	201	204	206
Côte d'Ivoire	1352	1407	1286	1408	1229	1370	1421	1482	1542	1588	1635
Ghana	497	737	599	740	615	675	747	771	774	821	882
Nigeria	173	180	200	200	190	210	219	229	236	240	244
<b>Americas</b>	<b>428</b>	<b>462</b>	<b>443</b>	<b>446</b>	<b>415</b>	<b>445</b>	<b>475</b>	<b>499</b>	<b>512</b>	<b>518</b>	<b>520</b>
Brazil	163	163	171	162	126	160	166	178	185	190	191
Ecuador	86	117	116	114	115	115	120	124	125	125	125
Dominican Republic	47	47	31	42	44	50	53	54	54	55	55
<b>Asia/Oceania</b>	<b>510</b>	<b>525</b>	<b>559</b>	<b>670</b>	<b>627</b>	<b>690</b>	<b>732</b>	<b>762</b>	<b>788</b>	<b>807</b>	<b>822</b>
Indonesia	410	430	460	560	520	580	614	639	661	678	693
Malaysia	36	34	29	34	33	34	35	37	37	37	36
<b>WORLD</b>	<b>3169</b>	<b>3537</b>	<b>3377</b>	<b>3759</b>	<b>3376</b>	<b>3713</b>	<b>3915</b>	<b>4076</b>	<b>4193</b>	<b>4324</b>	<b>4459</b>

TABLE 3. COMPARISON BETWEEN THE REFERENCE AND THE 34% SCENARIO

Reference Scenario	Forecasts	Projections				
	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
<b>SUPPLY AND DEMAND</b>						
World production, '000 tonnes	3713	3915	4076	4193	4324	4459
World grindings, '000 tonnes	3727	3805	3900	4024	4154	4285
<b>WORLD COCOA STOCKS</b>						
End-of-season stock levels	1536	1607	1742	1869	1995	2125
Surplus/Deficit	-51	71	135	126	127	129
<b>Stocks-to-grindings ratio (%)</b>						
	41%	42%	45%	46%	48%	50%
<b>COCOA PRICES</b>						
SDR/tonnes (2006/2007)	1374	1446	1414	1343	1297	1257
<b>World production Value</b> (millions SDRs in 2006/2007)	5101	5662	5763	5632	5607	5605

Scenario 34 %	Forecasts	Projections				
	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013
<b>SUPPLY AND DEMAND</b>						
<i>Production Reduction</i>		200	200	200	410	410
World production, '000 tonnes	3713	3715	3876	4056	4026	4190
World grindings, '000 tonnes	3727	3805	3851	3932	4057	4141
<b>WORLD COCOA STOCKS</b>						
End-of-season stock levels	1536	1409	1396	1479	1408	1415
Surplus/Deficit	-51	-58	25	-128	-38	93
<b>Stocks-to-grindings ratio (%)</b>						
	41%	37%	36%	38%	35%	34%
<b>COCOA PRICES</b>						
SDR/tonnes (2006/2007)	1374	1446	1595	1627	1573	1693
<b>World production Value</b> (millions SDRs in 2006/2007)	5101	5373	6181	6597	6332	7094

CHART 1.

### Projections of world cocoa production

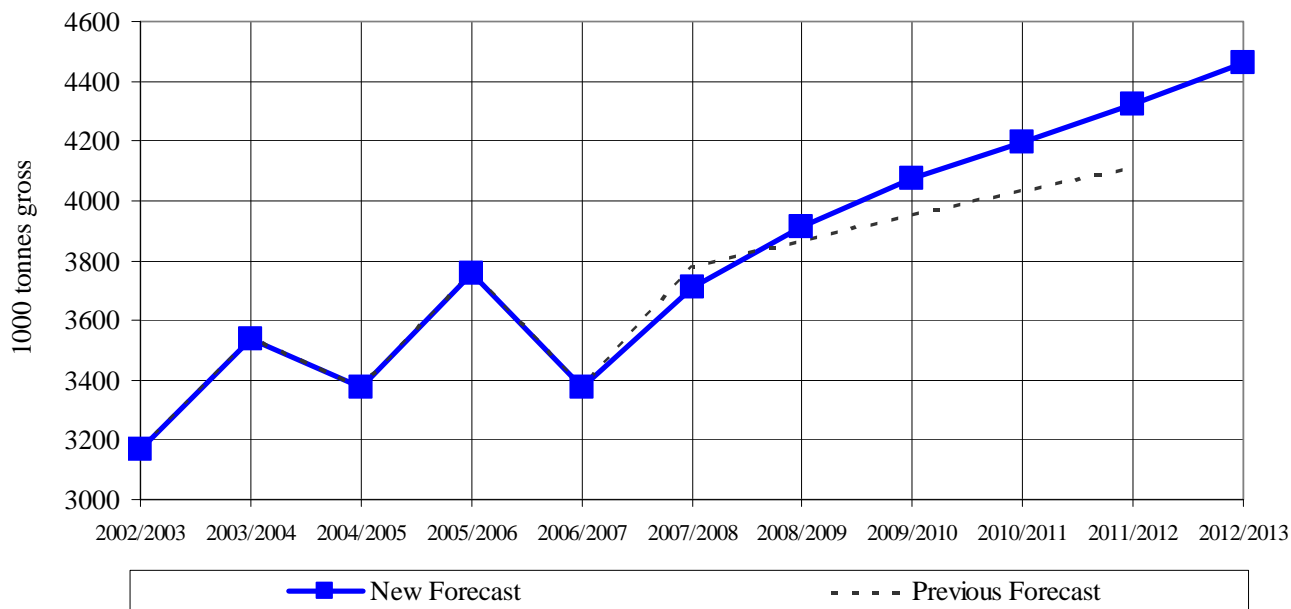


CHART 2.

### Projections of world cocoa grindings

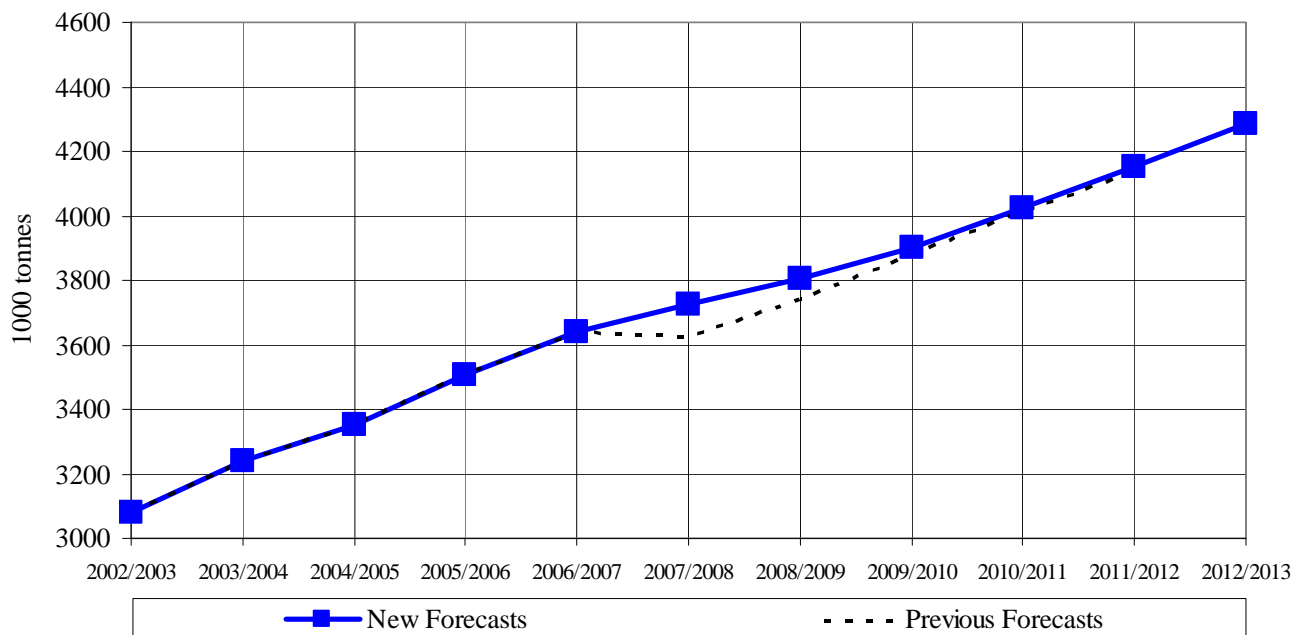


CHART 3.

Projections of world cocoa stocks

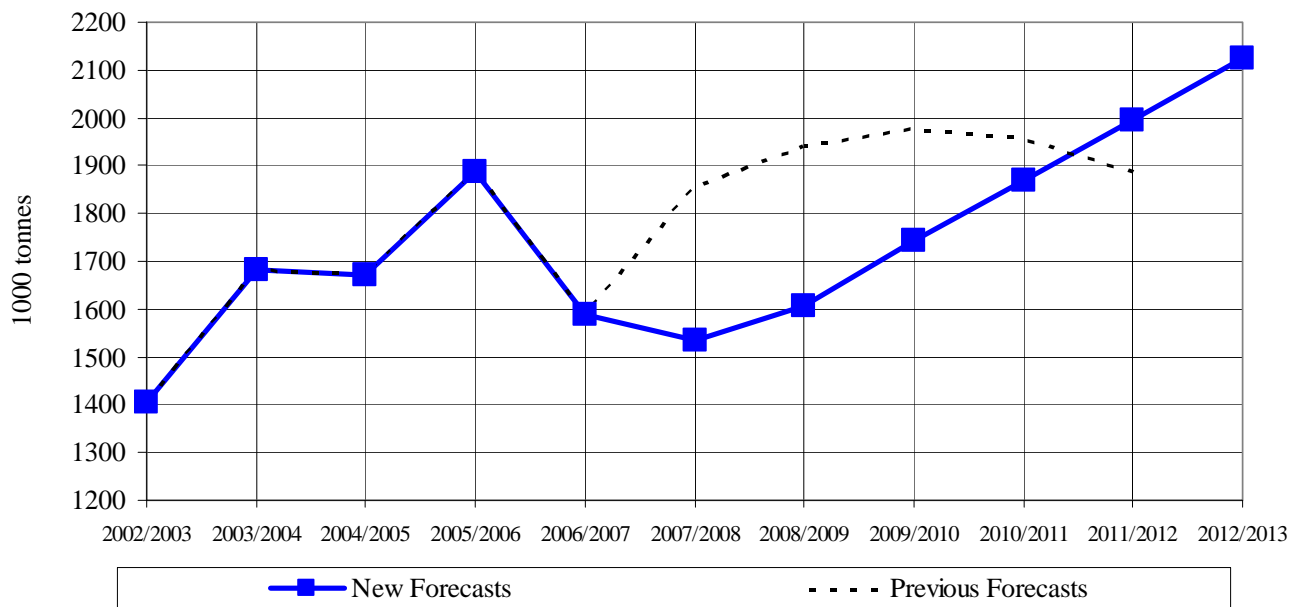


CHART 4.

Projections of world stocks to grindings ratio

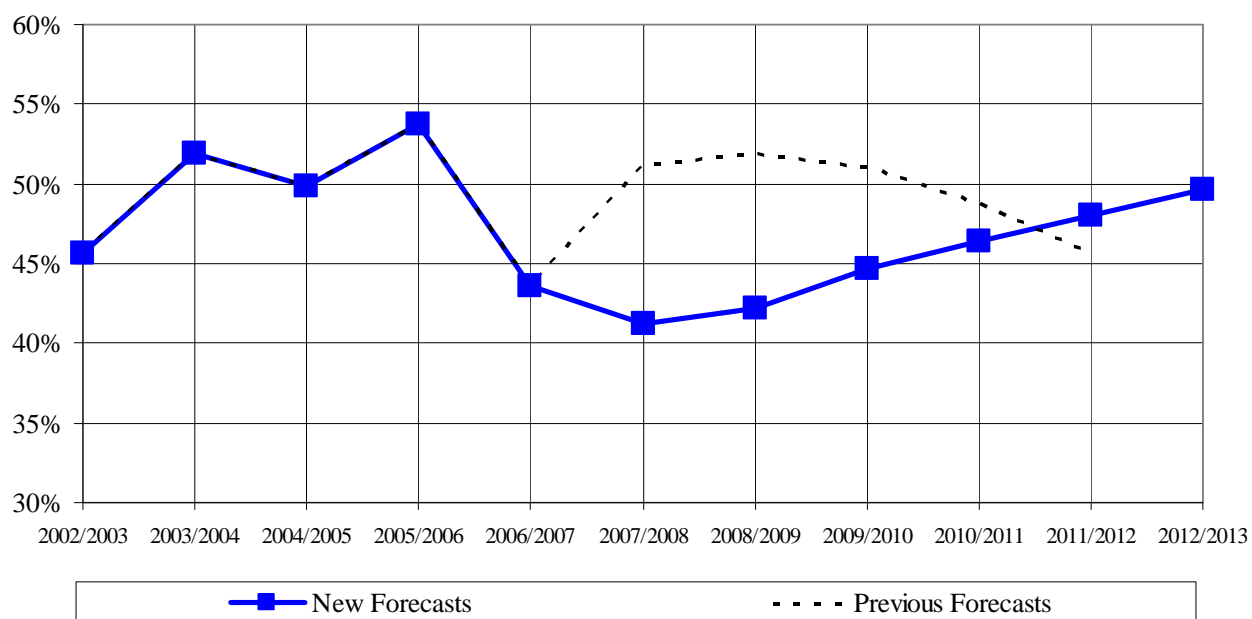


CHART 5.

### Projections of annual average cocoa prices

