



COMMITTEE ON COMMODITY PROBLEMS

INTERGOVERNMENTAL GROUP ON TEA

TWENTY-THIRD SESSION

Hangzhou, the People's Republic of China, 17-20 May 2018

CURRENT MARKET SITUATION AND MEDIUM TERM OUTLOOK

I. INTRODUCTION

1. Document CCP:TE 18/CRS1 presents an overview of the current market situation and medium term outlook to 2027 for tea. The analysis is based on data received by the Secretariat from member countries, supplemented by data from other sources, including FAOSTAT and the International Tea Committee (ITC). Macro-economic data were sourced from the International Monetary Fund (IMF), World Bank and Organization for Economic Cooperation and Development (OECD), particularly for those used in the medium term projections.

2. To supplement the information in this document, member countries of the Intergovernmental Group on Tea (IGG/Tea) which have provided market commentaries to the Secretariat, will each be given ten minutes to make a presentation at the plenary session. The Secretariat is extremely grateful to Argentina, China, India, Indonesia, Kenya, Sri Lanka and Vietnam for providing the Secretariat with an overview of developments in their tea subsectors. This spirit of cooperation among members should be encouraged as countries promote marketing priorities of the Group in the areas of:

- Improving market transparency;
- Fostering market expansion; and
- Value chain enhancement.

3. Delegates are invited to review the information presented in this document with its annexed tables and the presentations made by the countries which have provided marketing update and commentaries of their respective tea industries. Additional information is also available in the Secretariat's publication *World Tea Production and Trade: current and future development*¹.

4. Finally, delegates are kindly requested to amend and supplement the information where necessary, with updates pertaining to their countries.

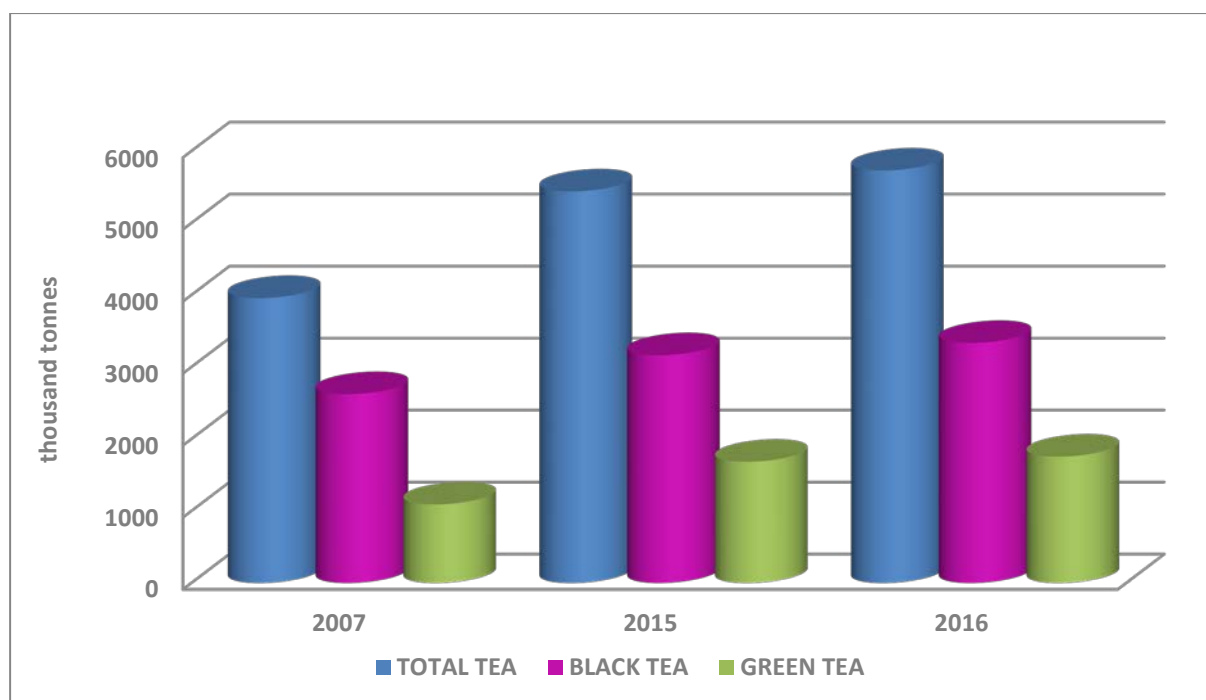
¹ <http://www.fao.org/3/a-i4480e.pdf>.

II. PRODUCTION

5. World tea production (black, green, instant and other) increased by 4.4 percent annually over the last decade to reach 5.73 million tonnes in 2016 (Figure 1). China was responsible for the accelerated growth in global tea output, as production in the country more than doubled from 1.17 million tonnes in 2007 to 2.44 million tonnes in 2016. The expansion in tea production in China was in response to unprecedented growth in domestic demand, underpinned by the country's economy which grew at an average annual rate of 10 percent over the last 30 years. The massive expansion is also a result of increased consumer health consciousness and the rapid development of herbal tea beverages in the country characterized by a longstanding tradition of drinking tea.

6. China accounted for 42.6 percent of world tea production, with an output of 2.44 million tonnes in 2016; production in India, the second largest producer, increased to a record high of 1.27 million tonnes, due to favourable weather conditions. Output in the two largest exporting countries, Kenya and Sri Lanka, reached 475 300 tonnes and 295 300 tonnes, respectively. Production in Kenya increased by 18.0 percent, while in Sri Lanka it declined by 11.0 percent. The tea industry in Sri Lanka showed its greatest year-on-year crop shortfall in recent times, as the subsector faces various challenges due to severe weather conditions, coupled with government restrictions on fertilizer subsidies. However, crop shortfalls in 2015 and 2016, recovered in 2017. At the world level, black tea production increased annually by 3.0 percent and green tea by 5.4 percent over the last decade, in response to continued firm prices and green tea's perceived health benefits.

Figure 1 – World Tea Production



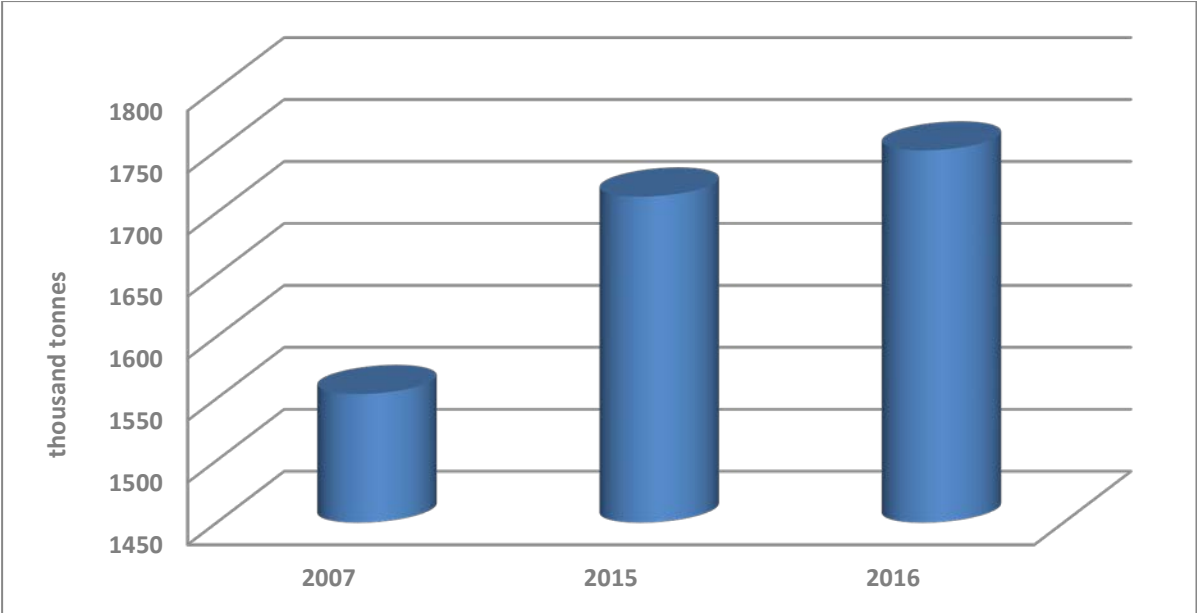
Source: FAO IGG/Tea Secretariat

III. EXPORTS

7. World tea exports increased annually by 1.4 percent over the last decade to reach 1.75 million tonnes in 2016 (Figure 2), underpinned by larger shipments from Kenya, with exports reaching a record level of 436 924 tonnes in 2016, a 16.0 percent increase from 2015, as well as a strong annual growth of 3.4 percent in green tea exports (compared to the annual growth of black tea exports of 1.0 percent). Lower annual growth in exports was recorded by China and India, as larger portions of

production, were consumed domestically. However, India achieved the highest tea exports in 2017, after 36 years, thus hitting the record levels registered in 1981.

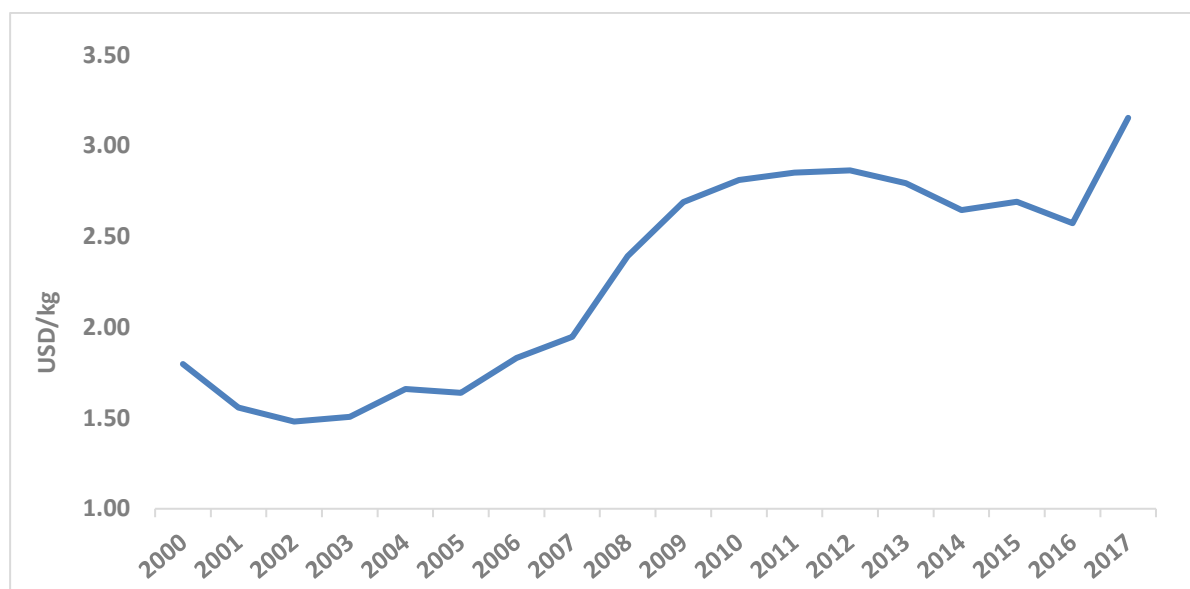
Figure 2 – World Tea Exports



Source: FAO IGG/Tea Secretariat

IV. PRICES

8. International tea prices, as measured by the FAO Tea Composite price, remained firm over the last decade. The FAO Tea Composite Price is a weighted average price index for black tea, which includes CTC and Orthodox teas. The FAO Tea Composite price fell by 4.4 percent in 2016, due to continued weakened economic growth rates associated with lower world oil prices. After declining to 2.57 USD per kg in 2016, the FAO Tea Composite Price increased by 22.6 percent in 2017, to a record high of 3.15 USD per kg. The significant increase is owed to rising domestic and foreign demand and tighter supplies. Prices increased sharply for both, orthodox and CTC teas, in the four major auctions: Calcutta, Cochin, Colombo and Mombasa. (Figure 3).

Figure 3 – FAO Tea Composite Price

Source: FAO IGG/Tea Secretariat

9. Other main drivers of international tea prices are market access, the potential effects of pests, diseases and weather conditions on production and changing dynamics among retailers, wholesalers and multinationals.

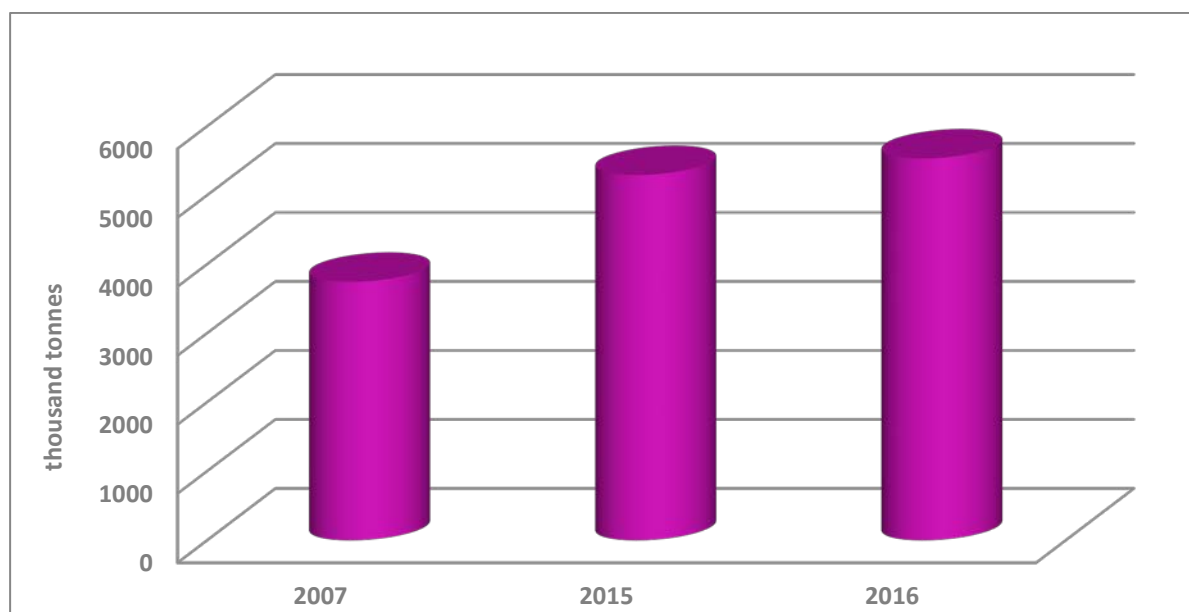
V. CONSUMPTION

10. The main determinant for growth of the global tea economy is demand for the commodity. The analysis of demand for tea carried out by the IGG/Tea Secretariat in selected markets indicates that both black and green tea are price inelastic. Price elasticities for black tea vary between -0.32 and -0.80, while estimates for green tea price elasticities range between -0.69 and -0.98.

11. Several factors influence the demand for tea, including the traditional price and income variables and demographics such as age, education, occupation and cultural background. In addition, health has a great influence on tea consumption as people increase their awareness related health impacts of carbonated drinks. Tea is being a major beneficiary as sales of regular and diet soda, milk and fruit beverages decline. This trend has led the IGG/Tea to recommend strengthening consumer awareness of the health benefits of tea consumption through an international generic promotion programme.

12. World tea consumption increased annually by 4.5 percent to 5.5 million tonnes over the decade to 2016 (Figure 4). The expansion was underpinned by the rapid growth in per capita income levels, notably in China, India and other developing and emerging economies. Growth in demand expanded significantly in most of the tea producing countries in Asia, Africa and Latin America. In China, consumption expanded spectacularly at an annual rate of 10.1 percent over the decade, reaching 2.1 million tonnes in 2016, or 38.6 percent of world tea consumption. India, with consumption at 1.05 million tonnes, was the second largest tea consumer in 2016, accounting for 19.0 percent of the global total.

13. In traditional importing countries of Europe (except Germany) and the Russian Federation, tea consumption has declined over the last decade. The European tea market is mature and per capita consumption has been declining as competition from other beverages, particularly bottled water and carbonated drinks, has intensified, while for the Russian Federation, the decline in oil prices has negatively impacted on the country's tea imports.

Figure 4 – World Tea Consumption

Source: FAO IGG/Tea Secretariat

VI. PROJECTIONS

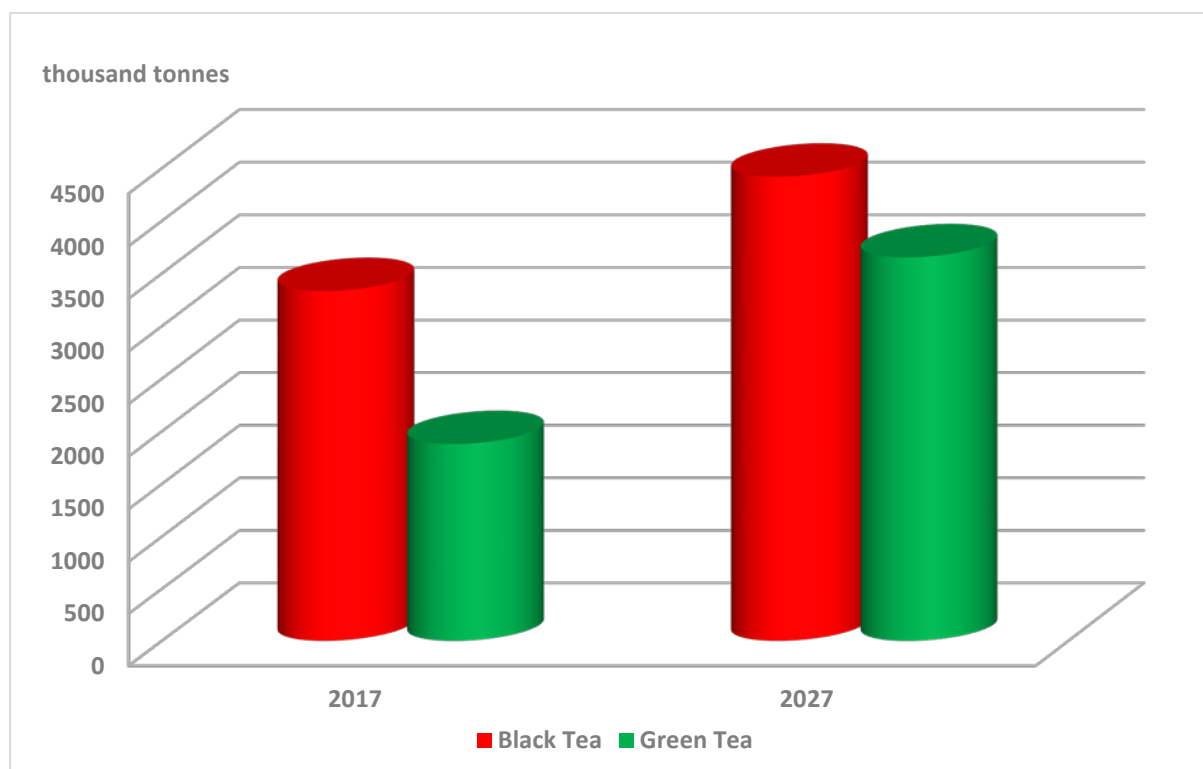
14. The medium term projections were generated by the FAO World Tea Model, which is a partial equilibrium dynamic time series model. Details of the model can be found in document CCP: TE 10/2².

A. PROJECTED PRODUCTION

15. To 2027, world black tea production is projected to increase by an annual growth rate of 2.2 percent to reach 4.42 million tonnes, reflecting major increases in China, Kenya and Sri Lanka (Figure 5 and Annex Table 1). The expansion in China would be significant as output should approach that of Kenya, the largest black tea exporter, underpinned by strong growth in domestic demand for black teas such as *Pu'er*.

World green tea output would increase at an even faster rate of 7.5 percent annually to reach 3.65 million tonnes, again reflecting an expansion in China, where green tea output is expected to more than double from 1.53 million tonnes in 2015-2017 to 3.31 million tonnes in 2027 (Annex Table 2). The expansion is expected to result from increased productivity rather than an expansion in area, through replanting of higher yielding varieties and better agricultural practices. Vietnam is also expected to substantially increase its production of green tea with an average annual growth rate of 6.8 percent despite ongoing quality issues which affect the price and exports earning of the country.

² Document CCP:TE 10/2 is available on the Secretariat's website: <http://www.fao.org/docrep/meeting/018/K7538E.pdf>.

Figure 5 – Actual and Projected Production: Black Tea and Green Tea

Source: FAO IGG/Tea Secretariat

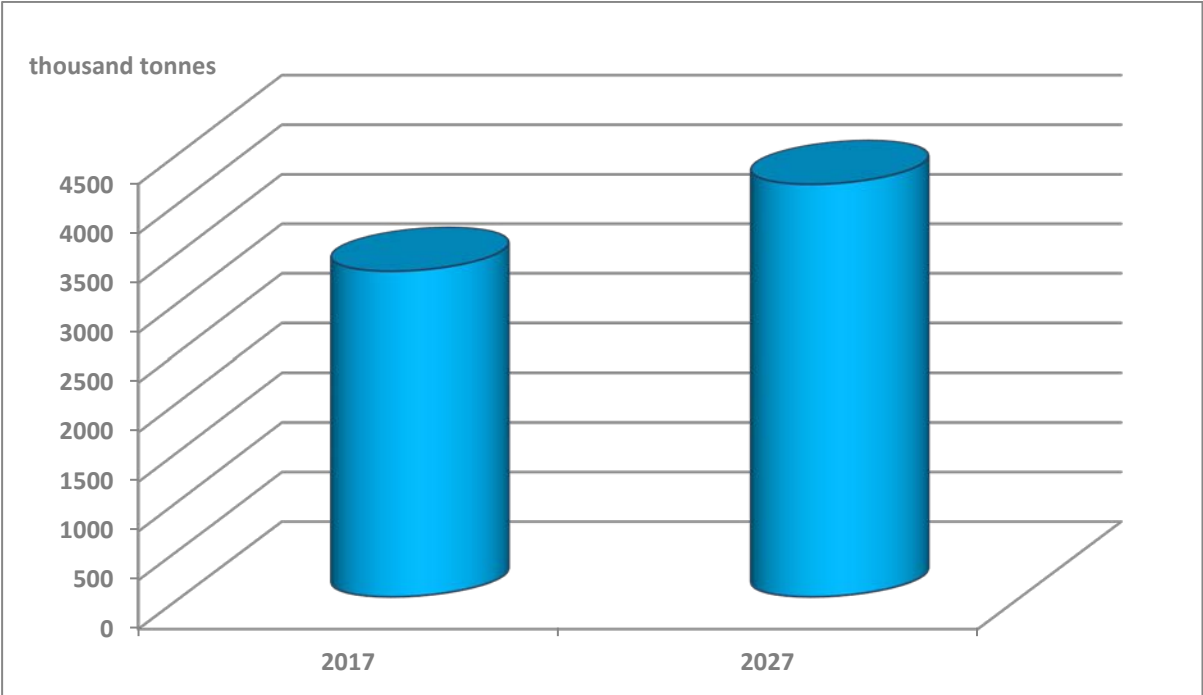
B. PROJECTED CONSUMPTION

17. As for mid-term projections of tea consumption: for non-tea producing countries, net imports were used as a proxy for consumption; and for producing countries, actual domestic consumption was used. Data on green tea consumption were not complete and therefore, it was difficult to make any meaningful projections.

18. Black tea consumption is projected to grow at 2.5 percent annually to reach 4.17 million tonnes in 2027 (Figure 6 and Annex Table 3), reflecting the strong growth in consumption in producing countries, which should more than offset projected declines in traditional tea importing countries. The largest expansion within the five top producing countries is expected in China where an annual growth of 5.9 percent is projected over the next 10 years. African countries are expected to show higher growth in their consumption with Rwanda leading the move (9 percent) followed by Uganda (5 percent), Kenya (4.4 percent), Libya (4.4 percent), Morocco (4.2 percent), and Malawi (4.2 percent). Moderate growth rates ranging between 2 and 3.5 percent are expected in other tea producing countries such as Bangladesh (3.1 percent), India (2.2 percent), Sri Lanka (3.3 percent), Tanzania (1.8 percent) and Vietnam (2.0 percent). Lower consumption growth rates are expected in western countries with UK consumption projected to be negative as black tea struggles to maintain consumers' interest amid growing competition from other drinks including coffee. Only Germany (1.4 percent) and Poland (1.3 percent), followed by the Netherlands and France (both at 0.6 percent) are expected to have consumption growth rates higher than the region's average of 0.2 percent.

19. Major factors contributing to the expansion in consumption in tea producing countries are the growth in per capita income, the increased awareness of the health benefits of tea consumption and the product diversification process attracting more customers in non-traditional segments including young people. The rapid growth of black tea consumption in China is due to the popularity of brick teas, such as *Pu'er*, which are heavily promoted for their health benefits.

Figure 6 – Actual and Projected Consumption: Black Tea



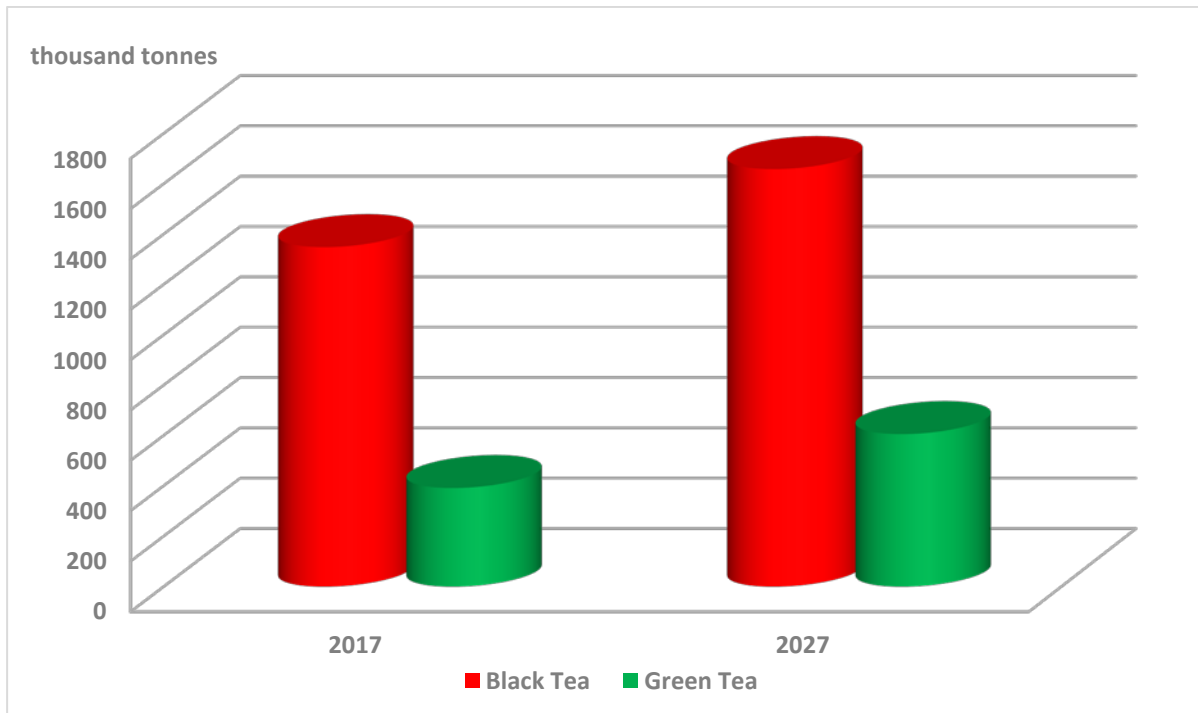
Source: FAO IGG/Tea Secretariat

C. PROJECTED EXPORTS

20. Black tea exports are projected to reach 1.66 million tonnes in 2027 (Figure 7 and Annex Table 4), with positive but weak growth rates projected for Africa’s producing countries (0.91 percent), Kenya maintaining its leadership with an average annual growth rate of 2.89 percent, while Asia’s exports growth rates are negative, except for Vietnam (2.6 percent), with an average decline of 0.7 percent. However, by 2027, export volumes for Asia are projected to reach 840 623 tonnes compared to 711 816 tonnes for Africa.

21. Major exporting countries are expected to remain the same, with Kenya being the largest exporter followed by India, Sri Lanka, Argentina, Vietnam, Uganda , Tanzania, Rwanda, Malawi, and China.

22. World green tea exports are projected to grow by 5.0 percent annually to reach 605 455 tonnes by 2027 (Figure 6). China is expected to continue to dominate the export market, with an export volume of 416 350 tonnes, followed by Vietnam at a distant second with 148 493 tonnes, Indonesia with 12 889 tonnes and Japan at 10 445 tonnes. Japan and Vietnam are expected to be leading in terms of green tea exports growth rates, respectively at 9.3 and 9.0 percent, more than double compared to the growth rate expected for China (4 percent) for the next decade.

Figure 7 – Actual and Projected Exports: Black Tea and Green Tea

Source: FAO IGG/Tea Secretariat

VII. CONCLUDING REMARKS

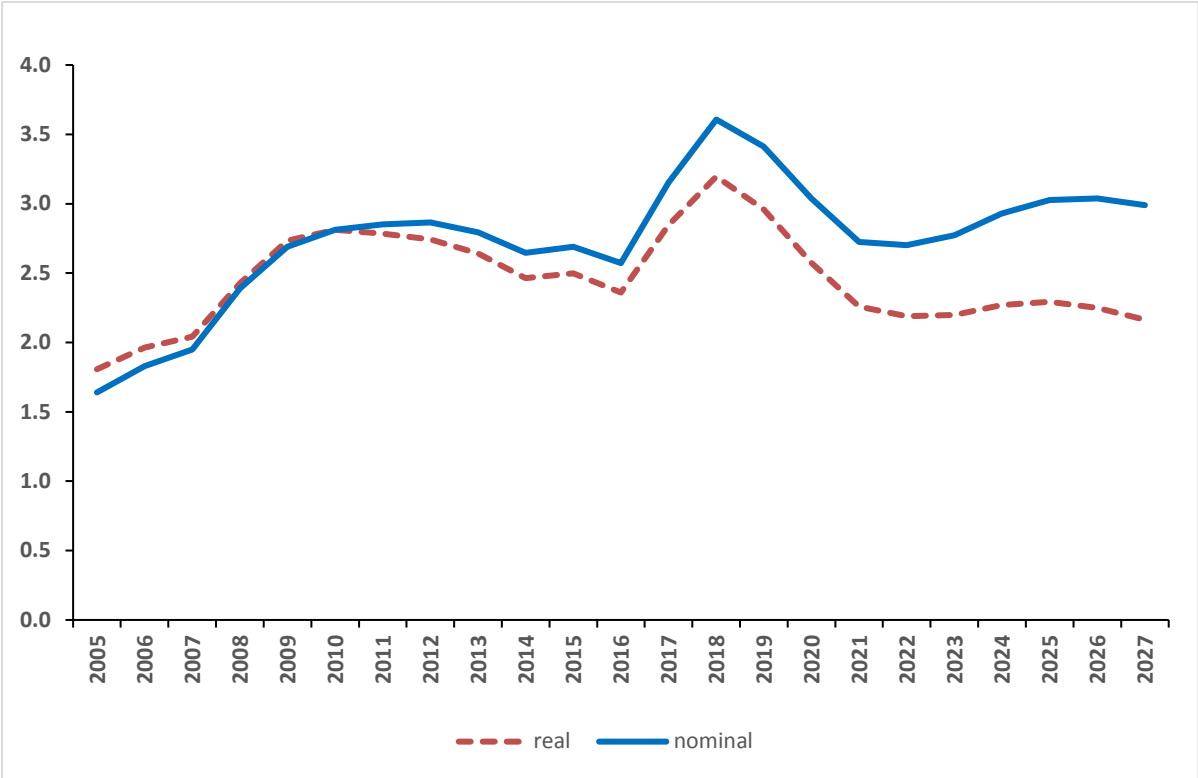
23. Robust demand and associated high prices stimulated substantial supply increases over the past decade, resulting in significant growth in domestic consumption and trade. Export earnings at the global level increased by 75 percent over the 10 years, from USD 3.12 billion in 2007 to USD 5.46 billion in 2016, contributing to improved rural incomes and household food security in tea producing countries.

24. The review of the world tea market indicates a 2.2 percent increase in trade volumes in 2016, resulting in an estimated 2.8 percent decline in export earnings to USD 5.46 billion at the global level. However, the export revenues contributed significantly to financing the food import bills of tea exporting countries. For example, in Kenya and Sri Lanka export earnings of USD 1.15 billion and USD 1.63 billion, respectively, financed more than 60 percent of Kenya's and 63.8 percent of Sri Lanka's food import bills in 2014. Although foreign exchange earnings from tea were relatively less for other producing countries, they remained significant.

25. In terms of price developments, the average FAO Composite Price remained firm over the last decade until 2014 when there was a 5.3 percent decline, mainly due to the weakening of CTC tea prices. Prices recovered in 2015, reflecting the recovery in CTC prices offsetting the decline in orthodox teas as imports from the Russian Federation and the Near East fell due to weakened economic growth rates associated with lower world oil prices.

26. In the medium term, the projections suggest that supply and demand of black tea will be in equilibrium in 2027 at a price of USD 3.0 per kg. Prices over the last decade increased from an annual average of USD 2.39 per kg in 2008 to USD 3.15 per kg in 2017, with monthly peaks of USD 3.18 per kg, USD 3.00 per kg and USD 3.26 per kg, reached in September 2009, December 2012 and May 2017, respectively. The projections indicate a decline in nominal terms of 1.4 percent, while in real terms, prices would actually decline by an annual average of 3.6 percent over the next decade (Figure 8).

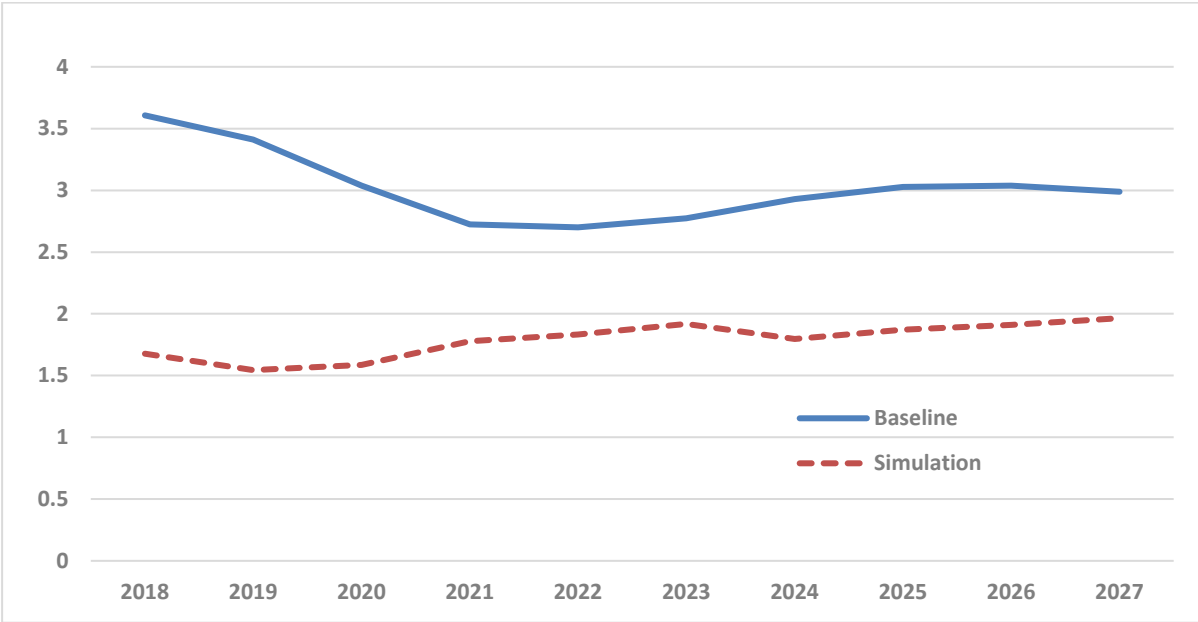
Figure 8 – FAO Tea Prices (USD/Kg) baseline projections to 2027



Source: FAO IGG/Tea Secretariat

27. Price developments in 2017 indicate the delicate balance between supply and demand, and the need to maintain this to achieve sustainability. For example, assuming that output increases a further 5 percent, the impact on prices would be quite dramatic: a nearly 40 percent decline over the next 10 years reaching USD 1.96 per kg in 2027 (Figure 9).

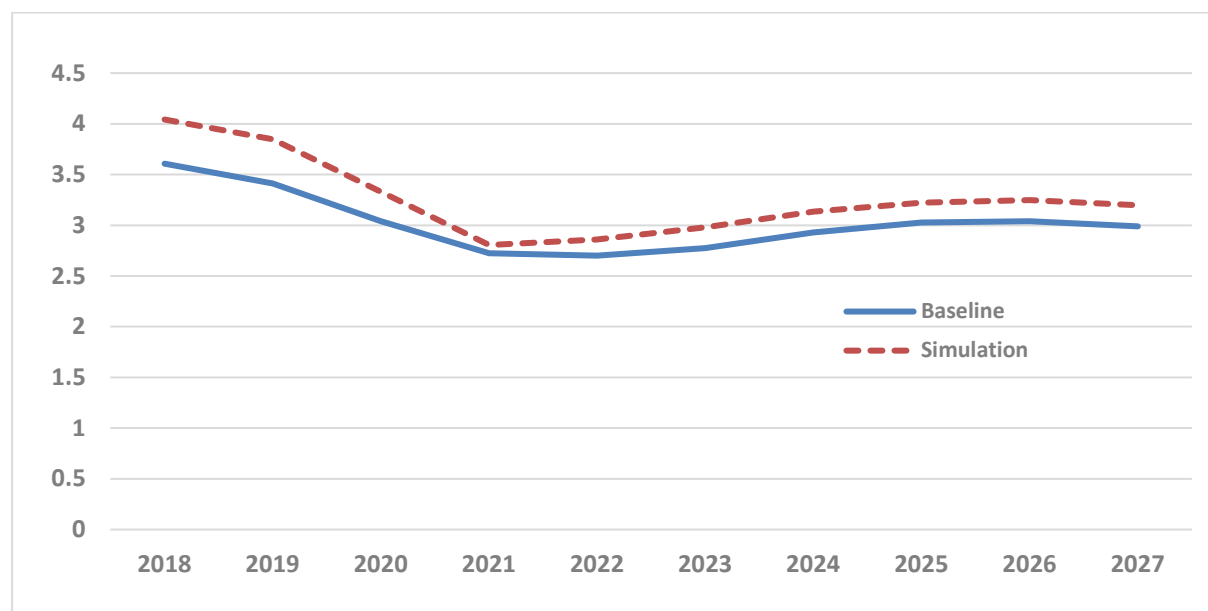
Figure 9 – Effect on prices of a 5 percent production increase over the baseline



Source: FAO IGG/Tea Secretariat

28. On the contrary, if the reactions to the rising per capita income in major emerging and developing countries and the growing awareness of tea health benefits were to stimulate consumption, say by 5 percent more than the baseline, then prices could on average be 8 percent higher for the decade, reaching USD 3.20 per kg in 2027 (Figure 10).

Figure 10 – Effect on prices of a 5 percent consumption increase from the baseline



Source: FAO IGG/Tea Secretariat

29. Therefore, reiterating the advice and recommendations of the IGG/Tea over the last 15 years and the tireless work of its Working Groups, caution needs to be exercised by stakeholders in the world tea economy not to over react to periodic price hikes. Greater efforts should be directed at expanding demand.

30. For example, there is scope for increasing per capita consumption in producing countries as they are relatively low compared to traditional import markets. It is also imperative to understand and address the ongoing declining consumption in the traditional market in Europe. Diversification into other segments of the market, such as organic and specialty teas, should be encouraged and the health and wellness benefits of tea consumption be used more extensively in promoting consumption in both producing and importing countries. However, in targeting potential growth markets, recognition of, and compliance with, food safety and quality standards is essential to address the gap between the growing volume of exports and the declining exports earnings for some countries.

31. Per capita consumption levels in tea producing countries have increased over the last decade. Although not significantly large in most cases, except for China and India, collectively their contribution has been significant. From 2007 to 2016, while per capita consumption has declined in traditional tea consuming countries in Europe by 17 percent, Africa and Asia's per capita consumption has accelerated. Countries with massive increases in per capita consumption include China (128.6 percent), Turkey (25.9 percent), Indonesia (26.6 percent), Pakistan (35.8 percent), Malawi (565.2 percent), Rwanda (110.2 percent) and Libya (39.8 percent). Tea consumption in Libya, Morocco, Afghanistan and China, reached, respectively, 2.23 kg per person, 1.89 kg per person, 1.60 kg per person and 1.52 kg per person in 2016. The per capita average consumption for the United States of America, a coffee dominated country with tea among the fastest growing beverage markets today, is on the rise to 0.40 kg per person in 2016, from 0.36 kg per person in 2007. Major declines are registered in the Netherlands (-39.7 percent), Poland (-33.5 percent), United Kingdom (-23.0 percent), Ireland (-17.2 percent), France (-23.6 percent) and Russian Federation (-12.4 percent).

32. Almost exclusively, market promotion in producing countries was based on the health benefits of tea consumption. Tea health benefits are leading the product's immersion into modern American culture and other emerging markets. Research efforts towards empirically supported evidences for health implications of tea consumption need to be strengthened further.

33. New growing markets are also building on product innovations and diversification into new segments of consumers. The bulk of the tea consumed in the United States today is iced tea, at 85 percent of consumption, but hot tea has been growing in popularity. Tea popularity is being driven by the Millennial (1981-1997) and Baby Boomer (1946-1964) generations. Ready-to-Drink tea consists of 48.6 percent of the market, with loose leaf (specialty) teas consisting of 17.5 percent of the market. These two market segments both experienced large growth rates, while other market segments (instant, bagged, pod) are experiencing stagnant levels of growth.

34. Other factors that could expand tea demand significantly over the next decade, but which have not been factored into the projections as data is not completely available, would be the innovative developments from non-traditional players in the retail and service sectors. The demand for tea has accelerated due to the ongoing retail revolution and the growing investment into tea education bringing new clientele to know more about tea, where it is sourced, the benefits of drinking tea, and how to properly brew it. Due to this, loose leaf tea has seen a new relevance in the United States of America. Promoting tea culture based market development and immersion in the cultural identity of societies across the world should be one of the strategies to sustain and expand consumption.

35. Greater cohesion in the efforts of producing countries and collaboration with consuming nations is needed towards harmonizing market requirements (MRLs and quality) and reducing costs of compliance.

On the supply side, the tea plant (*Camellia sinensis*) is highly sensitive to changes in growing conditions. Hence, commercial growing of tea is geographically limited to a few areas around the world, which are at risk under climate change. Therefore, an expected supply response to expanding demand may not be as easy as it has been in the past, given the possible constraints to the availability of suitable land.

36. Finally, the IGG/Tea has to consider future strategies and appropriate enabling policies to maintain the sustainable development of the rapidly changing global tea economy and mainstream climate change into tea development strategies.

ANNEX TABLES

Table 1 - Black Tea: Actual and Projected Production

Countries / Regions	P R O D U C T I O N			
	Estimated 2017	Projected 2027	Growth Rates	
			2008/2017	2018/2027
	Tons		Percent per year	
WORLD	3333316	4420015	3.1	2.2
Africa				
Kenya	439850	605915	3.4	2.7
Malawi	43127	42833	-1.5	-0.3
Zimbabwe	8500	9848	0.7	1.4
Rwanda	24000	30942	2.1	2.5
South Africa	2400	5177	4.2	7.6
Uganda	61411	82426	2.6	2.6
Tanzania United Rep	34000	42770	0.5	2.3
Other	42715	53448	2.1	2.1
Latin America and Caribbean				
Argentina	79000	100782	-0.4	2.2
Brazil	7000	7009	-2.0	-0.1
Other	9710	11228	1.7	1.2
Near East				
Iran, Islamic Republic of	26000	36430	-5.0	3.4
Turkey	310500	429308	4.9	3.2
Far East				
India	1260000	1617871	3.4	1.4
Sri Lanka	305000	370379	0.0	1.6
China	310000	554331	19.1	5.6
Vietnam	86000	100564	-3.7	1.3
Bangladesh	78659	96696	3.6	1.9
Malaysia	13000	10850	2.2	-1.8
Nepal	24264	29309	5.2	1.8
Indonesia	110195	108673	-1.7	-0.6
Other	42870	50064	1.4	1.3
CIS				
Russian Federation	3800	4349	2.7	1.2
Other CIS	4500	12416	1.1	10.1
Oceania	6800	6382	-0.8	-0.7

Table 2 - Green Tea : Actual and Projected Production and Exports

Countries / Regions	PRODUCTION					EXPORTS				
	Actual		Projected 2027	Growth Rates		Actual		Projected 2027	Growth Rates	
	2005-07	2015-17		2005-07/2015-17	2015-17/2027	2005-07	2015-17		2005-07/2015-17	2015-17/2027
	Tons			Percent per year		Tons			Percent per year	
World	998143	1772798	3653792	5.9	7.5	266234	371697	605455	3.4	5.0
China	778725	1527437	3312920	7.0	8.1	216191	281271	416350	2.7	4.0
Japan	96666.7	76667	79789	-2.3	0.4	1416	4292	10445	11.7	9.3
Vietnam	53119	94200	181871	5.9	6.8	29725	62725	148493	7.8	9.0
Indonesia	35149	34013	35398	-0.3	0.4	9908	11669	12889	1.6	1.0

Table 3 - Black Tea: Actual and Projected Consumption

Countries / Regions	CONSUMPTION			
	Estimated 2017	Projected 2027	Growth Rates	
			2008/2017	2018/2027
	Tons		Percent per year	
WORLD	3290726	4168289	3.2	2.5
Far East				
Pakistan	172911	250755	7.1	3.9
India	1040000	1264359	3.3	2.2
Sri Lanka	28760	37958	0.7	3.3
China	302353	541310	26.0	5.9
Vietnam	1650	1914	20.6	2.0
Bangladesh	83000	111109	5.5	3.1
Malaysia	34318	46403	4.0	3.1
Nepal	13511	18715	4.7	3.6
Indonesia	52000	64080	5.6	2.7
Other	69907	78382	0.3	1.2
Africa				
Kenya	37630	56567	8.4	4.4
Malawi	13837	20019	22.2	4.2
Morocco	339	503	6.7	4.2
Zimbabwe	2700	3458	-2.2	2.3
Rwanda	2200	5197	34.0	9.0
South Africa	25087	33071	3.1	2.9
Uganda	4433	7200	19.8	5.0
Tanzania United Rep	5000	5733	0.9	1.8
Other	64801	66093	0.1	0.2
Near East				
Iran, Islamic Republic of	81000	85985	-1.5	0.6
Turkey	319621	447406	4.9	3.3
Iraq	39300	41630	-0.5	1.0
Saudi Arabia	31283	41713	2.7	2.9
Syrian Arab Republic	28000	28241	-1.3	0.3
United Arab Emirates	43000	46555	-2.2	0.8
Egypt	84801	89951	0.5	0.7
Libya	14000	21740	5.1	4.4
Sudan	26051	30220	1.0	1.6
Jordan	4979	6918	-2.7	3.3
Israel	1531	2031	3.9	2.9
Other	56278	79212	-3.0	3.3
Latin America and Caribbean				
Argentina	6507	7180	-0.7	1.1
Brazil	7172	7920	3.4	1.0
Other	34735	40621	1.5	2.0
North America				
United States	111756	122222	1.8	0.9
Canada	13776	15216	1.6	1.0
Europe				
EU (28)	188532	193030	-1.4	0.2
UK	105510	103044	-2.1	-0.2
Germany	24952	28725	5.4	1.4
Poland	13882	15803	-2.8	1.3
Netherlands	6670	7071	-7.9	0.6
France	6206	6588	-2.3	0.6
Other EU	23402	23402	0.8	0.0
Other Europe	2633	3013	-1.5	1.4
CIS				
Russian Federation	141192	137812	-1.5	-0.1
Other CIS	70685	77985	-0.6	1.2
Japan	14760	14019	-2.9	-0.2
Oceania	14697	14843	-0.7	0.1

Table 4 - Black Tea: Actual and Projected Exports

Countries / Regions	E X P O R T S			
	Estimated	Projected	Growth Rates	
	2017	2027	2008/2017	2018/2027
	Tons		Percent per year	
WORLD	1348512	1658514	0.8	1.2
Africa				
Kenya	400000	524140	3.5	2.8
Malawi	29290	22814	-5.3	-3.1
Zimbabwe	5800	6390	1.7	0.9
Rwanda	23500	24647	2.2	1.5
South Africa	4510	4781	-1.5	0.0
Uganda	55589	71723	2.5	2.4
Tanzania United Rep	30000	37035	1.5	2.4
Other	25234	20287	2.8	0.0
Far East				
India	240680	362932	2.8	-1.2
Sri Lanka	281840	335522	-0.2	1.4
China	35000	24236	-2.6	-0.8
Vietnam	61850	72315	-4.4	2.8
Bangladesh	650	910	-20.2	0.0
Malaysia	1293	1421	7.7	0.0
Nepal	10334	10835	5.1	-0.7
Indonesia	43338	22969	-8.3	7.5
Other	10903	7292	10.8	0.0
Near East				
Turkey	6117	2191	13.1	0.0
Other	0	0	-	-
Latin America and Caribbean				
Argentina	72693	93766	-0.4	2.3
Brazil	19	2119	-71.3	0.0
Other	972	994	1.9	0.0
CIS				
Russian Federation	0	0	-	-
Other CIS	2500	2300	2.3	0.0
Oceania	6361	6847	-1.8	0.0