

Economic Outlook 2021- 2023



June 2022

DISCLAIMER:

The Department of Economic Affairs, Commerce and Industry is prudent with the projection for 2022 and 2023 due to increasing uncertainties in time. Therefore, these estimations have to be considered preliminary and used with care.

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List of Abbreviations

ABBREVIATION	EXPLANATION
ADR	Average Daily Rate
ATA	Aruba Tourism Authority
CARTAC	The Caribbean Regional Technical Assistance Centre
DEACI	Department of Economic Affairs, Trade and Industry
EGS	Export Goods and Services
EIA	U.S. Energy Information Administration
ET	Export Tourism
GDP	Gross Domestic Product at market prices
IGS	Import Goods and Services
PC	Private Consumption
PUBC	Public Consumption
TC	Total Consumption
TCV	Total Cruise Visitor
TI	Total Investments
TSV	Total Stayover Visitor
PI	Private Investments
PUBI	Public Investments

Abstract

The war in Ukraine between Russia that started in February 2022 has considerable impact on the economies in the world including Aruba. Due to the high social financial economic interconnection between nations, the impact of this ongoing war is felt by all nations. The world will feel the effects of higher inflation, rising energy costs, disrupted trade, exodus of war victims to neighboring countries and shortage of food. This war will also have consequences for Aruba. The Department of Economic Affairs, Commerce and Industry is prudent with the projection for 2022 and 2023 due to the increasing uncertainties in time. Therefore, these estimations have to be considered preliminary and used with care.

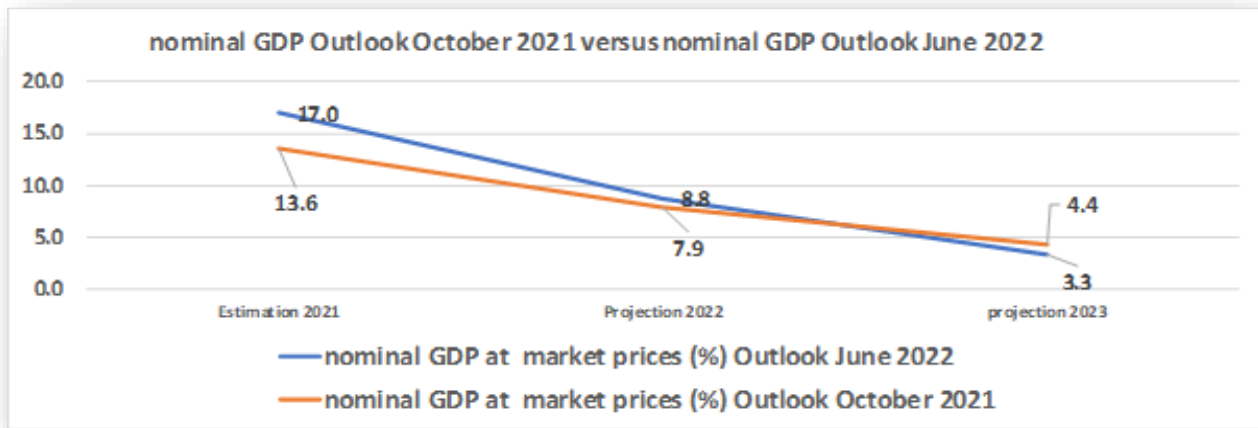
Compared to 2020 the estimation for the year 2021 shows an increase of 17.0 percent of the Gross Domestic Product in nominal terms (nominal GDP). When compared to the estimation in October 2021, this signifies a nominal GDP change of 3.4 percentage points higher (from 13.6 percent to 17.0 percent). See graph 1. This difference is mainly due to a more positive recovery in the tourism sector and private investments, then initially expected. The nominal GDP in 2021 (Afl. 5,426m) was approximately at 88.7 percent compared to the level of 2019 (Afl. 6,118m).

For the years, 2022 and 2023 the nominal GDP is projected to increase by 8.8 percent and 3.3 percent respectively compared to 2021 and 2022. It is expected that the nominal GDP for 2022 (Afl. 5,904m) will be at 96.5 percent of the level of 2019 (Afl. 6,118m), while the nominal GDP in 2023 (Afl. 6,101m) will be at 99.7 percent of the level of 2019. This indicates that the local economy is reaching its pre- pandemic levels. Compared to the forecast of October 2021, the year 2022 shows an increase of 0.9 percentage points (from 7.9 percent to 8.8 percent), which is mainly influenced by the extraordinary recovery in the tourism sector.

In the baseline, it is assumed that the prices of water and electricity will increase in 2023. The inflation rate is forecasted to be at 4.3 percent in 2022 and 5.5 percent in 2023. In addition, in this baseline, it is assumed that the Value-Added Tax is not introduced in 2023.

The tourism sector is the main driver of the continuous growth since the COVID-19 pandemic in 2020. The growth in the Export Tourism is forecasted in 2022 at 31.3 percent and is 11.6 percent higher compared to 2019. Compared to the previous forecast in October 2021, Export Tourism in 2022 is estimated higher (+10.1 percent), due to an increase in expenditure per night in stayover visitor that is based on the latest data (April 2022). This indicates that the tourists are spending on average more than in 2021. For 2023, an Export Tourism growth is forecasted at 4.4 percent, which is 16.5 percent higher compared to 2019. This growth is due to a higher forecasted expenditure per night, where the main contributors are a higher projected Average Daily Rate and non-accommodation expenditures for 2022 and 2023 compared to 2019.

Graph 1: Development of the nominal GDP estimates and projections from Outlook October 2021 versus Outlook June 2022



Graph created by DEACI using the MARUBA Model, as per June 2022.

Furthermore, compared to the forecast in October 2021, higher Import of Goods and Services are expected in 2022, mainly driven by a higher expected imported inflation. These results in a forecasted Import of Goods and Services of 7.5 percentage points higher (18.1 percent to 25.6 percent) compared to the forecast in October 2021.

For the year 2023, the nominal GDP shows a slower growth (-1.1 percent) compared to the previous projection in October 2021 (from 4.4 percent to 3.3 percent). This is due the stronger estimated economic recovery in 2021 and 2022.

In addition to having a baseline, two other scenarios have been added for the year 2023, including the intention to introduce the Value Added Tax system. The assumption is a 6 percent Value Added Tax rate that will be imposed on all food and beverages products (excl. alcohol) and on services and other products a Value Added Tax rate of 14 percent. Currently, Aruba does have a turnover tax of 6 percent.

The Value Added Tax in each of the 2023 scenarios adds an additional inflation on the baseline. The Value Added Tax rate of 6 and 14 percent will create an additional inflation between 5.3 percent and 9.9 percent considering two different scenarios for the roll over effect of indirect taxes on the end prices. This is above the projected inflation in the base scenario of 5.5 percent for the year 2023.

This implies for scenario A (incl. rollback 6 percent indirect taxes (BBO/BAZV/BAVP) in final prices a forecasted inflation of 10.7 percent for 2023. For scenario B (excl. rollback of 6 percent indirect taxes (BBO/BAZV/BAVP) in final prices) a forecasted inflation of 15.3 percent. The nominal GDP growth in 2023 will be 5.1 percent in scenario A and in scenario B, the nominal GDP growth will be 6.5 percent.

Chapter 1: Introduction

The Economic Outlook is a product of the Department of Economic, Commerce and Industry (DEACI) that provides analysis and forecasts of the economic indicators and growth of Aruba. For compilation of the Economic Outlook different data sources are used from various institutions, like the Central Bank of Aruba, the Central Bureau of Statistics, the Department, of Finance the Tax Department, the Aruba Tourism Authority, the Aruba Hotel and Tourism Association, the Aruba Airport Authority, the Social Insurance Bank Aruba and the Department of Labor and Research.

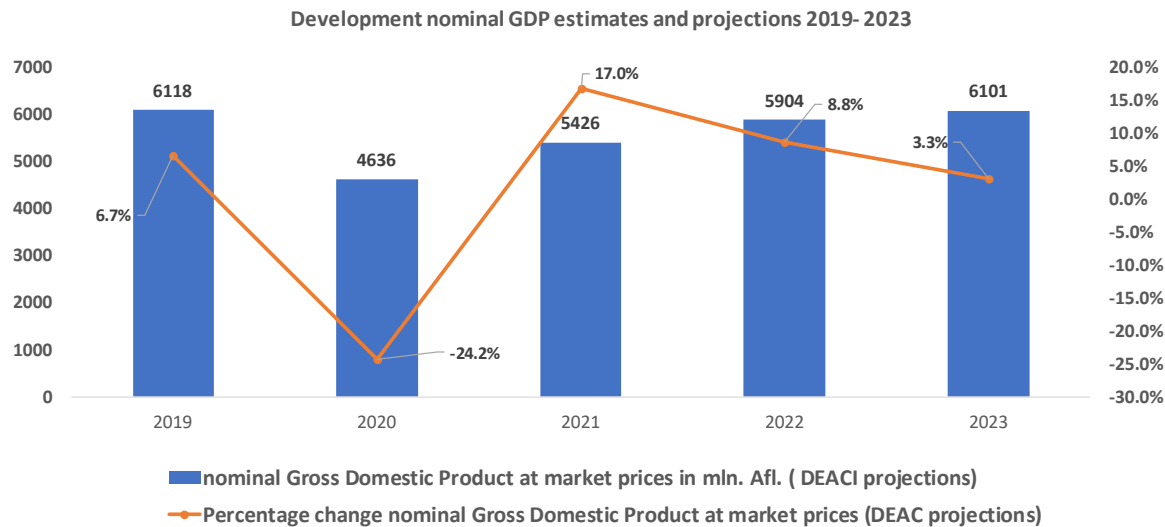
In addition to these institutions, certain organizations are also interviewed to discuss their perception of the economic situation of Aruba. Not only their perception of the current economic conditions is being requested, but also what the mayor investment plans and risks are for the current and coming years for various projects on the island. At last the DEACI holds regular meeting with the Commission Macro Model members to present and discuss the assumptions, estimations and forecasts before publishing the Economic Outlook.

Last October 2021, the DEACI presented the outlook for the years 2021-2023 based on data up to October 2021. After monitoring and reviewing the forecasts based on new national and international developments and more updated data, DEACI presents the revised estimates for 2021 and the forecasts for 2022-2023. Please note that DEACI is still cautious about forecasts for 2022 and 2023 due to the uncertainties in the coming period. These estimates should still be considered preliminary and used with care.

The following chapter 2 presents the baseline for the final estimation for the year 2021 and the forecasts for the years 2022 and 2023. In chapter 3 two different scenarios are presented, scenario A and scenario B for the year 2023, based on the intention of a two rate Value Added Tax (VAT) system and its inflation impact. Subsequently, in chapter 4, the global economy is analyzed and finally, the Annex includes all tables and assumptions of this Economic Outlook 2021-2023, June 2022.

Chapter 2: Economic Outlook 2021 - 2023

Graph 2: Development nominal GDP estimates and projections 2019- 2023



Graph created by DEACI using the MARUBA Model, June 2022.

Since 2021, the economy is showing signs of recovery as a consequence of the excellent performance of the tourism sector.

From the year 2021 and the forecasts for 2022- 2023 the tourism industry is expected to have a positive impact on the economic growth in Aruba. In 2021 the total stayover visitors (TSV) has shown an unexpected growth reaching 72 percent of the level of 2019. For 2022 and 2023, the tourism sector is also forecasted to be the main driver of the island's economic performance by assuming a level of 95 percent in 2022 and a level of 100 percent in 2023 compared to 2019.

Baseline 2021

The tourism sector reacted very positively in the last quarter of 2021 with the result that the projected growth of October 2021 has been adjusted in the projections of June 2022.

Compared to 2020 the estimation for the year 2021 shows an increase of 17.0 percent of the nominal GDP as shown in Graph 2. This is mainly due to a positive recovery in the tourism sector and private investments. The nominal Export Tourism (ET) shows a growth of 65.1 percent in 2021 compared to 2020.

This all resulting in a nominal Private Consumption (PC) growth of 4.9 percent in 2021 compared to previous year. As a result, nominal Import of Goods and Services (IGS) are expected to increase by 20.2 percent compared to 2020.

The nominal GDP in 2021 (Afl. 5,426m) will be approximately at 88.7 percent compared to the level of 2019 (Afl. 6,118m). See table 2 in Annex B for the detailed figures for the baseline estimates 2021.

Baseline 2022 and 2023

For the years 2022 and 2023, the nominal GDP is forecasted to increase by 8.8 percent and 3.3 percent respectively compared to 2021 and 2022. It is expected that the nominal GDP for 2022 (Afl. 5,904m) will be at 96.5 percent of the level of 2019 (Afl. 6,118m), while the nominal GDP in 2023 (Afl. 6,101m) will be at 99.7 percent of the level of 2019. See table 2 in Annex B for the detailed figures for the baseline forecast 2022-2023.

Nominal GDP growth could reach 8.8% in 2022, which is 96.5% of the level of 2019. For 2023 a Nominal GDP Growth is projected of 3.3%, which is 99.7% of the level of 2019.

This indicates that the local economy is still recovering.

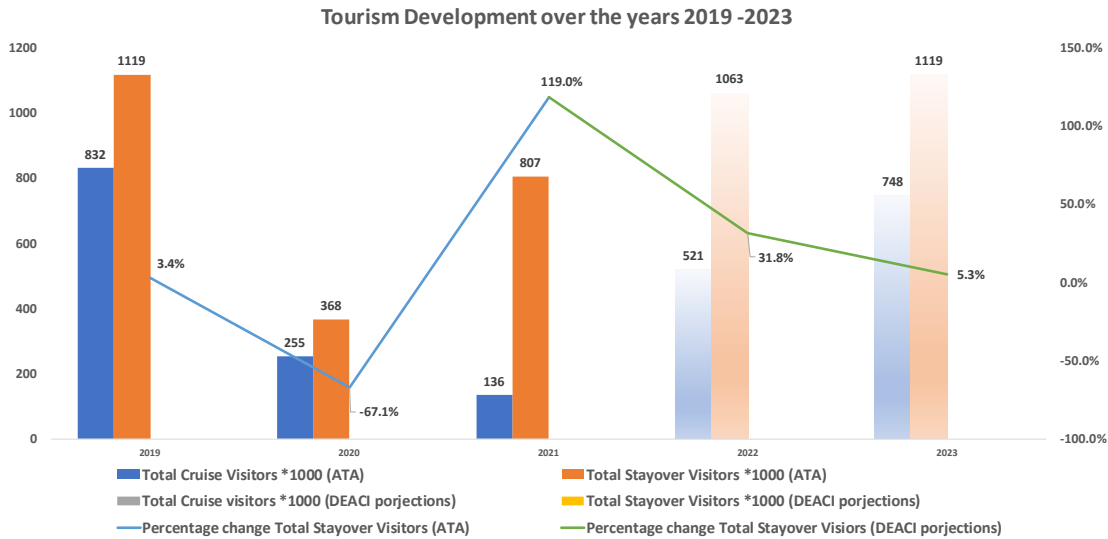
In the baseline, it is assumed that the prices of water and electricity will rise in 2023 because of international increases in energy prices. The fact is that the utilities companies cannot continue to absorb the energy cost increases and therefore will need to adapt the water and electricity prices in 2023. The VAT is not included in the baseline for the year 2023.

Export

It is expected that the tourism industry will continue to develop positively thanks to the promotion of the Aruba Tourism Authority (ATA) and other key stakeholders in the core business of the tourism sector. The TSV recovered in 2021 to 72.1 percent of the level of 2019. A continuous increase in the number of tourists is forecasted for the years 2022 and 2023. In this outlook 1,062,997 TSV is forecasted in 2022 and in 2023 a full recovery of 1,118,944 TSV, which is 100 percent of the level of 2019 (Commission Macro Model, May 2022). See graph 3.

The Total Cruise Visitors (TCV) was in 2021 at 16.3 percent of the level of the year 2019. An increase in the number of TCV is forecasted for the years 2022 and 2023. TCV is forecasted a total of 520,880 in 2022 and in 2023 a TCV of 748,259, which is 89.9 percent of the level of 2019 (Commission Macro Model, May 2022). See graph 3.

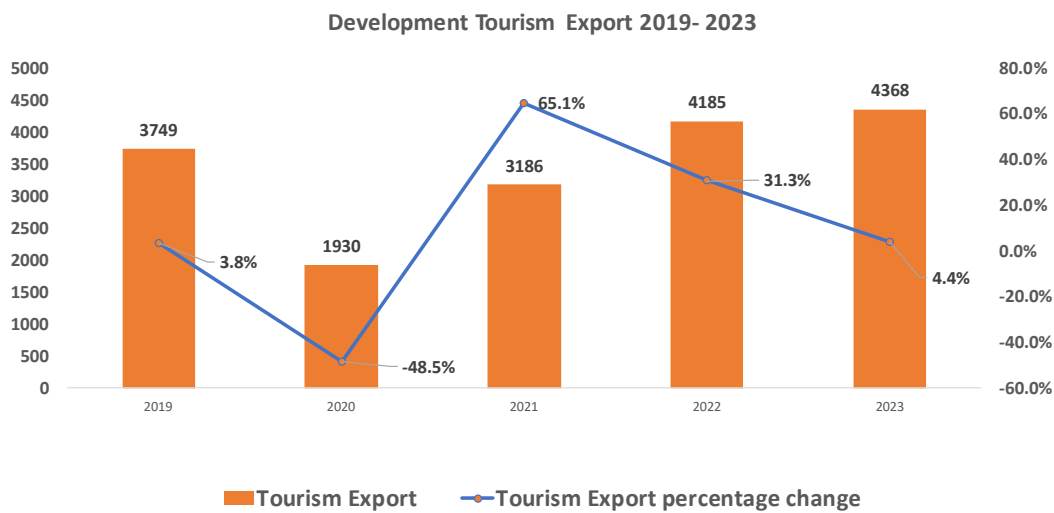
Graph 3: Development Tourism 2019- 2023



Graph created by DEACI using the MARUBA Model, June 2022.

Not only the quantity of tourism has been gradually increasing since 2019, but the average spending per tourist per night has also shown an increase. The main driver of the expected growth in 2022 compared to 2021 is an increase in ET by 31.3 percent as shown in graph 4. For 2023, an ET growth is expected of 4.4 percent compared to 2022.

Graph 4: Development Tourism Export 2019- 2023



Graph created by DEACI using the MARUBA Model, June 2022.

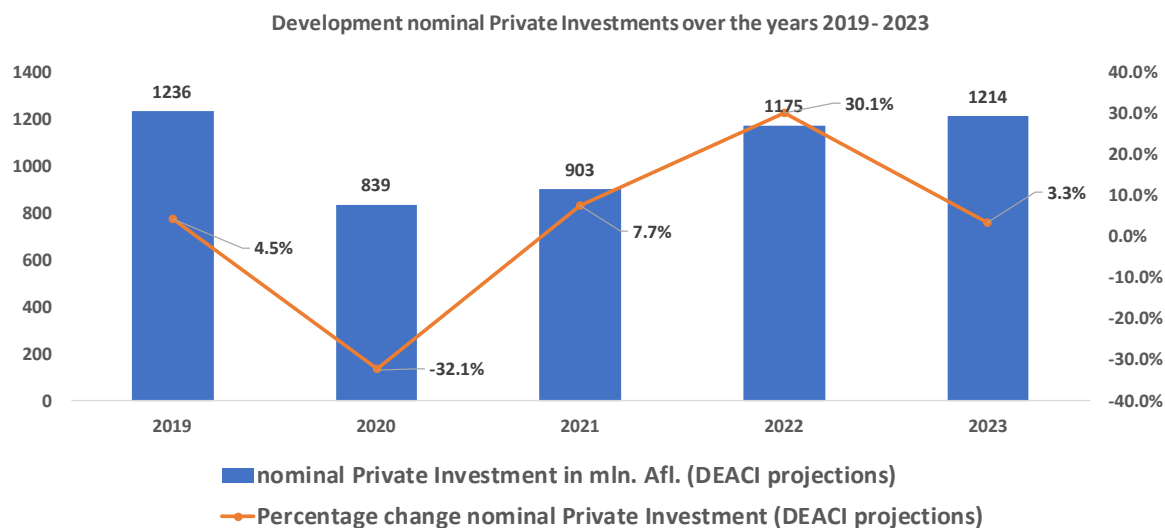
The main contributor for the higher expenditure per night is a higher projected ADR and non-accommodation expenditures for 2022 and 2023 compared to 2019.

The assumption is that the ADR is projected to grow by approximately 10 percent in 2022 compared to 2021 and in the year 2023, this will remain equal to the year 2022.

Finally, the total Export of Goods and Service (EGS) is expected to grow in 2022 by 27.7 percent compared to 2021 and for 2023 a growth of 4.8 percent. Note that in 2023, this growth is due to more tourism, that result in more tourism revenue.

Investment

Graph 5: Development GDP nominal Private Investments over the years 2019- 2023



Graph created by DEACI using the MARUBA Model, June 2022

Another driver is Private Investment (PI) which is expected to rise in 2022 by 30.1 percent, that is 95.1 percent of the level of 2019. It is expected that most of the investments that were on hold in 2020 and 2021, due to the pandemic, will be gradually picking up. It is also important to notice that the tourism sector has started to pick up which will have a spin off effect and will result in more economic activities. For 2023, a PI is forecasted to grow by 3.3 percent, which is 98.3 percent of the level of 2019. See graph 5.

The assumption regarding PI is that in the years 2022 and 2023 a 50 percent risk factor for planned projects has been calculated for those projects that as per 2022 did not start construction.

PI is forecasted in 2022 at a 95.1 percent of the level of 2019. For 2023 a PI is forecasted at 98.3 percent of the level of 2019.

Subsequently Public Investment (PUBI) is projected for 2022 with a growth of 28.2 percent compared to 2021 while a 0.0 percent growth is expected in 2023. For PUBI in 2022 and 2023 the same amount of Afl. 20 mln. has been budgeted.

Consumption

Total Consumption (TC) shows a growth of 2.1 percent in 2022, which is 91.9 percent of the level of 2019. For 2023, a TC is projected of 1.6 percent, which is 93.4 percent of the level of 2019. It needs to be noted that there will be an additional inflation in 2023 due to the price increase of water and electricity. See graph 6.

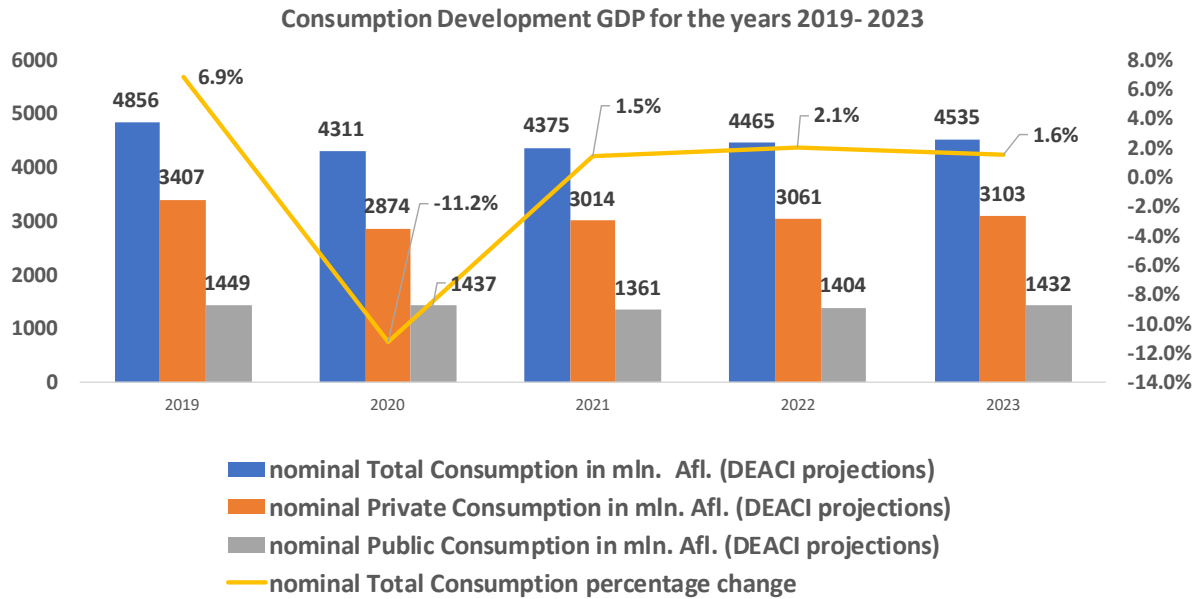
Private Consumption (PC) shows a growth of 1.6 percent in 2022. For 2023, PC is projected to grow by 1.4 percent. In 2022, PC will be at the level of 89.8 percent of 2019 and in 2023 this will be at a level of 91.1 percent.

The influencing factors in 2023 are based on the assumptions that the average wages in the private sector will recover in 2023 to the level of 2019. Also, additional inflation will be added to the total inflation, due to the price increase of water and electricity in 2023.

Subsequently for Public Consumption (PUBC) for 2022 is projected a growth of 3.2 percent compared to 2021 and a growth of 2.0 percent in 2023. Although there is a 12.6 percent cut in government wages, this increase is attributed to the in 2022 and in 2023 expected imported inflation in goods and services.

PC is forecasted in 2022 at 89.8 percent of the level of 2019. For 2023 a PC is forecasted at 91.9 percent of the level of 2019.

Graph 6: Consumption Development for the years 2019- 2023



Graph created by DEACI using the MARUBA Model, June 2022.

Import of Goods and Services

Tourism has been the main source of income for Aruba since the nineties. This has created a correlation between an increase in tourism consumption and the increase in imports. The higher the dependency on tourism, the higher the dependency on IGS. The IGS shows a growth of 25.6 percent in 2022, which is 4.0 percent higher compared to the level of 2019. For 2023, an IGS is expected to increase with 3.2 percent, which is 7.3 percent higher compared to the level of 2019. These growths are mainly driven by the high expected imported inflation due to international developments.

The inflation for the baseline for the year 2022 is 4.3 percent and 5.5 percent in 2023, assuming that the prices of water and electricity will increase in 2023.

In the Baseline there is no VAT introduction in 2023.

Chapter 3: 2023 Scenario A and scenario B

In addition to having a baseline, two other scenarios are presented for the year 2023.

Currently, the government is working on the implementation of a tax reform, with the intention of introducing this in January 2023. As a result, there will be a shift from direct to indirect taxation.

The assumption in the two scenarios is a 6 percent VAT rate that will be imposed on all food and beverages products excl. alcohol and for services and other products a VAT rate of 14 percent. Currently, Aruba does have a turnover tax of 6 percent, with the intention of being replaced by the two VAT rate system. The VAT will create an additional inflation to the baseline inflation in each one of the scenarios for 2023.

Scenario A: VAT 6 percent and 14 percent:

Including price increase of water and electricity in 2023 and rollback 6 percent indirect taxes (BBO/BAZV/BAVP) in final prices will result in a 5.3 percent VAT inflation in 2023.

Scenario B: VAT 6 percent and 14 percent:

Including price increase of water and electricity in 2023 and NO rollback of 6 percent indirect taxes (BBO/BAZV/BAVP) in final prices will result in a 9.9 percent VAT inflation in 2023. The results are shown in table 1.

The VAT option 6 percent and 14 percent will create an additional inflation between 5.3 percent and 9.9 percent considering the two different scenarios for the roll over effect of indirect taxes on the end prices, exceeding the base scenario inflation of 5.5 percent.

The assumption in scenario A is that the businesses will partially rollback the turnover taxes e.g. intermediate consumption.

In *scenario A* for 2023 we forecast a nominal GDP growth of 5.1 percent. Inflation is projected to reach 10.7 percent (vs. 5.5 in the baseline) in 2023.

The assumption in scenario B is that the businesses will not rollback the turnover taxes in the prices

In *scenario B* for 2023 a nominal GDP growth is forecasted of 6.5 percent Inflation is forecasted to reach 15.3 percent (vs. 5.5 in the baseline) in 2023.

Table 1: 2023 Scenario A and scenario B

	Baseline	Baseline	Scenario A: Including price increase of water and electricity in 2023 and VAT inflation 5.3% in 2023. Rollback 6% indirect taxes	Scenario B: Including price increase of water and electricity in 2023 and VAT inflation 9.9% in 2023. NO Rollback 6% indirect taxes
Nominal (in %)	Projection 2022	Projection 2023	Projection 2023	Projection 2023
Inflation (%)	4.3	5.5	10.7	15.3
GDP at market prices (In M. Afls)	5904	6101	6202	6285
GDP at market prices (%)	8.8	3.3	5.1	6.5
Private consumption (%)	1.6	1.4	1.4	1.4
Public consumption (%)	3.2	2.0	3.7	5.1
Total consumption (%)	2.1	1.6	2.1	2.5
Private investments (%)	30.1	3.3	3.3	3.3
Public investments (%)	28.2	0.0	0.0	0.0
Total investments (%)	30.1	3.3	3.3	3.3
Export Goods and Services (%)	27.7	4.8	4.8	4.8
<i>Export (tourism) (%)</i>	31.3	4.4	4.4	4.4
Import Goods and Services (%)	25.6	3.2	1.4	0.1
Tourism				
Total Stayover Visitors (number *1000)	1063	1119	1119	1119
Total Cruise Passengers (number *1000)	521	748	748	748
Export from Tourism(In M. Afls)	4185	4368	4368	4368

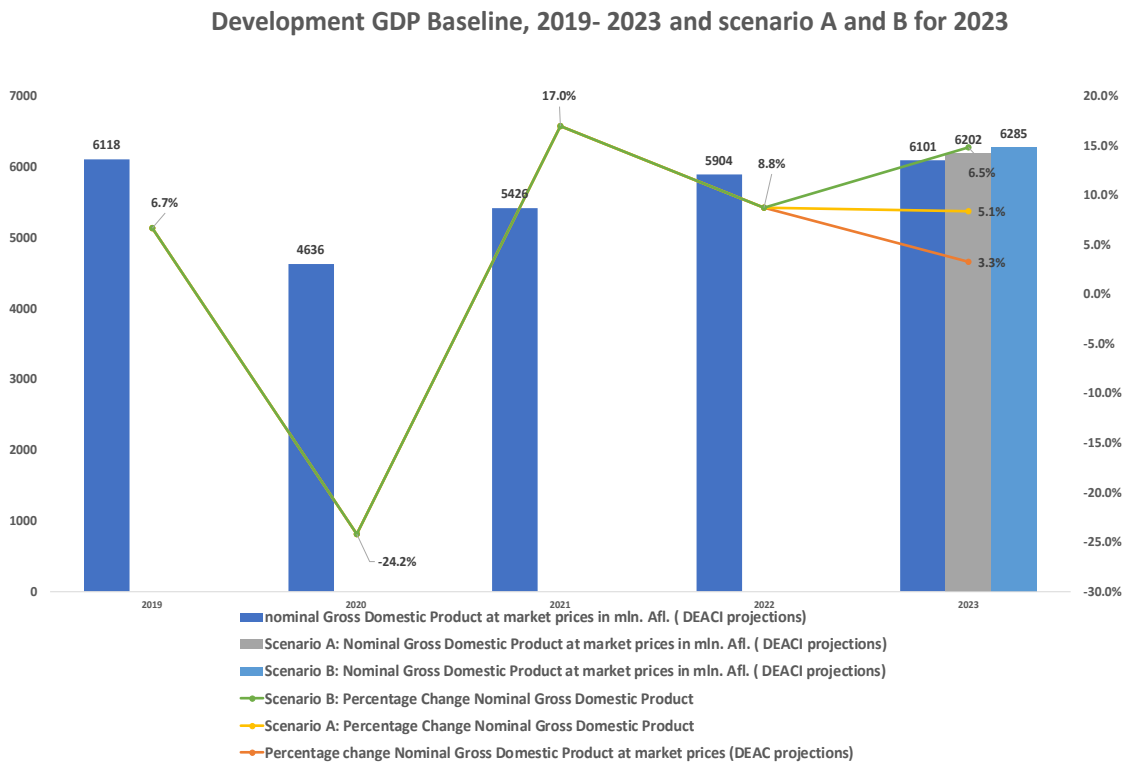
Table created by DEACI using the MARUBA Model

Changes are mainly seen in the total TC and IGS. In the baseline the IGS is expected to grow by 3.2 percent, and in *scenario A* it is projected to grow by 1.4 percent. Subsequently in *scenario B*, IGS is expected to grow by 0.1 percent vs. 3.2 percent in the baseline (see table 1). These changes in percentage growth indicates that the IGS is declining in each scenario due to higher inflation caused by the VAT tax and the increase of water and electricity in 2023.

Subsequently, in the baseline the TC is expected to grow by 1.6 percent and in *scenario A* it is projected to grow by 2.1 percent. In *scenario B* it is expected to grow by 2.5 percent. This continue increase is related to the inflation, which is pushing the prices up.

Although TC is projected to grow, this does not mean that the consumers are buying more products. The declining IGS shows that there could be a decrease in demand in goods and services due the inflation impact. Graph 7 shows the estimated and forecasted development in the nominal GDP from 2019-2022 and the different scenarios for 2023. Note once more that we are very prudent with the projections due to the unpredictable medium- and short-term factors related to the international - and national developments.

Graph 7: Development GDP Baseline 2019- 2023 and scenario A and B for 2023



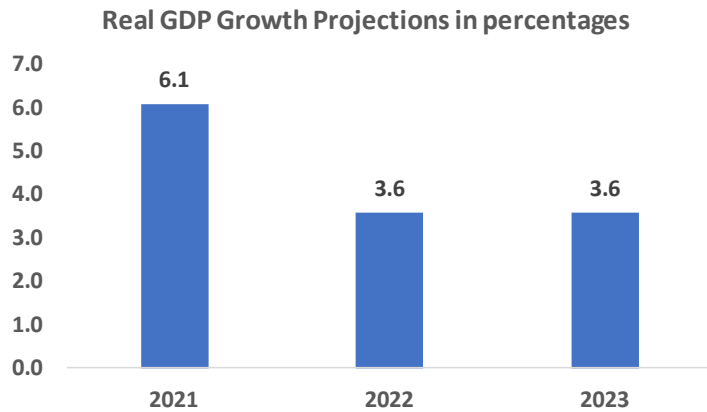
Graph created by DEACI using the MARUBA Model, June 2022.

Chapter 4: Global Economy

According to the IMF (WEO, April, 2022), the projected global economy is not recovering as expected after the COVID-19 pandemic. On the contrary the GDP growth is recovering slower than projected for advanced economies, emerging markets and developing economies.

The reason is the ongoing war in Ukraine and sanctions on Russia that has an impact on the world economic growth.

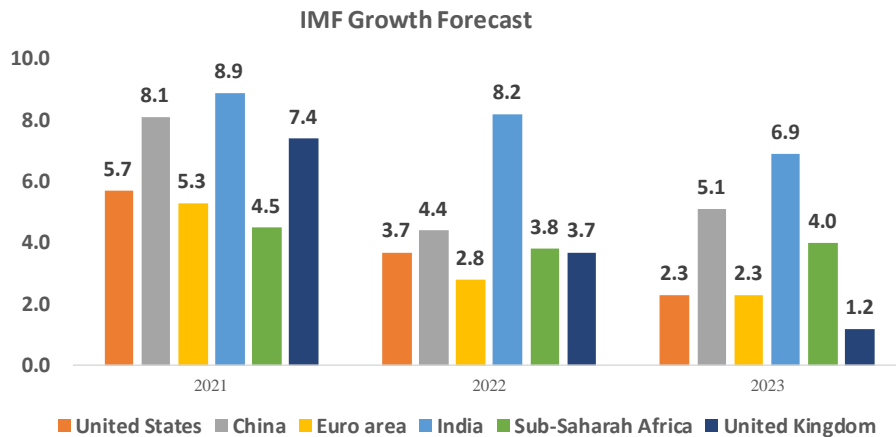
Graph 8: World GDP Growth



Graph created by DEACI using the IMF WEO April 2022, June 2022.

According to the IMF the real GDP growth in 2021 is estimated at 6.1 percent, and a slight increase of 3.6 percent is expected for the year 2022 and 2023 (see graph 8). The war in Ukraine is hitting the global economic growth and is pushing inflation up especially food and energy. Trade is also being disrupted due to the ongoing war.

Graph 9: IMF growth forecast



Graph created by DEACI using the IMF WEO April 2022, June 2022.

in 2023. The new projected 4.4 percent growth is 1.2 percentage points lesser than expected in the last outlook.

For the USA that has a direct impact on the Aruban economy, the real GDP is expected to increase by 3.7 percent in 2022 which is 1.5 percentage points lower than projected in the last world economic outlook. In 2023 a growth of 2.3 percent is projected (see graph 9).

China in turn is also growing by 4.4 percent in 2022 and 5.1 percent

Responsible for this slower increase in real GDP in China is related to the ongoing retrenchment of the real estate sector and the slower recovery of the private consumption. For the European area, real GDP is expected to grow in 2022 by 2.8 percent and 2.3 percent in 2023.

For India, Sub-Saharan Africa and the United Kingdom the growth of the real GDP is projected to be 8.2 percent, 3.8 percent and 3.7 percent respectively in the year 2022 followed by an increase of 6.9 percent 4.0 percent and 1.2 percent in 2023.

Global Inflation

The invasion of Russia in Ukraine has impacted not only the two countries but also the world. Countries will feel the effects of higher inflation and a decreasing growth of their GDP's. Some countries will have the difficult task in supporting the economic recovery from the COVID-19 pandemic and containing the rising inflation, especially the poor countries. Due to the high social financial economic interconnection between nations the impact of this ongoing war will be felt by all nations.



The war will have his marked on:

- Higher energy prices and higher prices for commodities like food.
- Since the COVID 19 the global economy had to deal with supply chain disruptions. Due to the war and the economic actions imposed by the Western countries on Russia, the supply chain disruptions have increased, contributing to a higher inflation.
- The migration from refugees from Ukraine to other European countries will also contribute to future economic shocks in the neighboring countries.

All these aspects mentioned in this paragraph will reduce the business confidence and consumer confidence creating higher investor uncertainty.

According to the IMF, the world inflation is projected at 7.4 percent in 2022, and 4.8 percent in 2023 (WEO, April 2022).

The U.S. inflation is expected to be 7.7 percent in 2022 and for 2023 the inflation is estimated at 2.9 percent (WEO, April 2022).

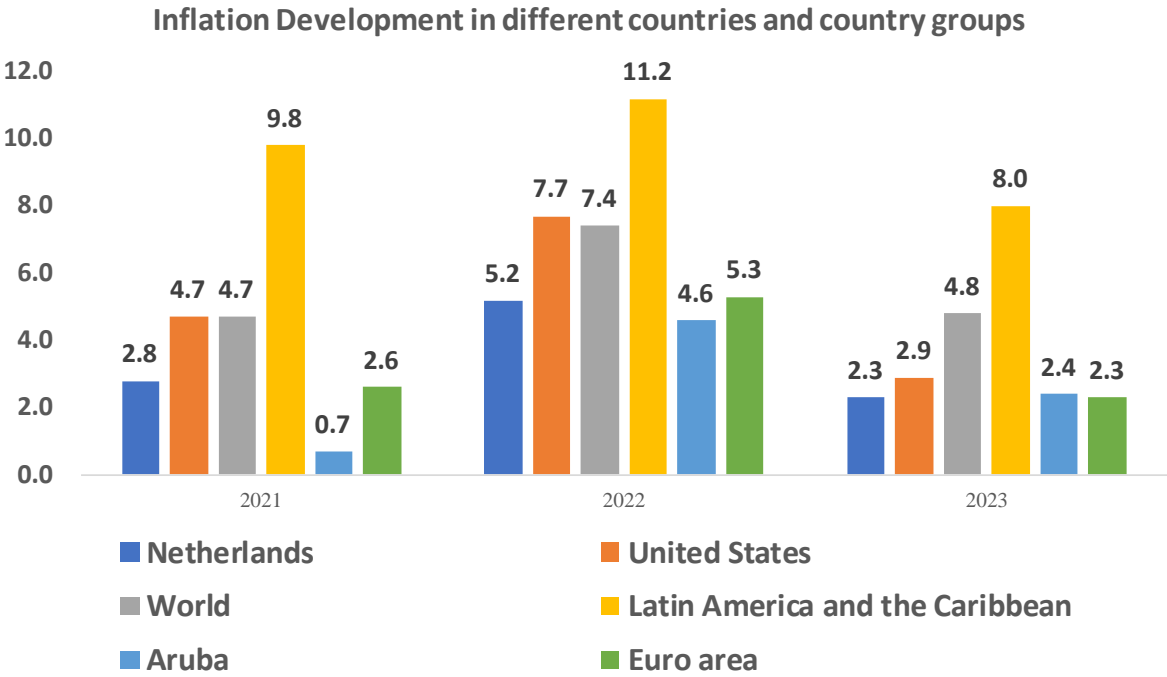
	2021	2022	2023
Netherlands	2.8	5.2	2.3
United States	4.7	7.7	2.9
World	4.7	7.4	4.8
Latin America and the Caribbean	9.8	11.2	8.0
Aruba	0.7	4.6	2.4
Euro area	2.6	5.3	2.3
EMU area	3.9	2.3	3.3
YUPPI	0.3	1.9	3.1

The Netherlands inflation is expected to be 5.2 percent in 2022 and 2.3 percent in 2023 (WEO, April 2022).

Latin America and the Caribbean inflation is expected to be at 11.2 percent for 2022 and 8.0 percent for 2023 (WEO, April 2022).

According to the IMF, the inflation for Aruba is projected at 4.6 percent in 2022, 2.4 percent in 2023. Take note: that the IMF has not incorporated the VAT rate system in 2023. See graph 10 for these figures.

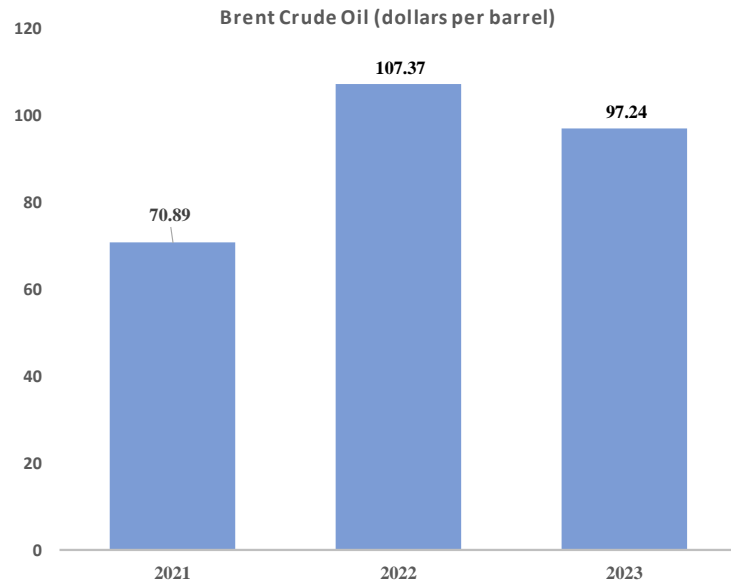
Graph 10: Inflation Development in different countries and country groups



Graph created by DEACI using the IMF WEO April 2022, June 2022.

Oil Prices

Graph 11: Brent Crude Oil (dollars per barrel)



Graph created by DEACI using EIA Short-term energy outlook, June 2022.

uncertain. Major factors driving energy supply uncertainty include how sanctions affect Russia's oil production, the production decisions of OPEC+, and the rate at which U.S. oil and natural gas producers increase drilling.

According to U.S. EIA (Short-term energy outlook, June 2022), the latest data for Brent Crude Oil prices shows an amount of \$70.89 per barrel in 2021. For 2022 and 2023 respectively \$107.37 and \$97.24 per barrel is expected.

The ongoing war between Russia and Ukraine and subsequent the sanctions on Russia created market disruption in the oil supply.

The given price forecast is highly

The U.S. Economy and the European Area and its impact on the Caribbean Region.

The IMF expects for the U.S. a real GDP growth of 5.7 percent for 2021 and for 2022 a growth of 3.7 percent and a growth of 2.3 percent in 2023. This means a positive outcome for the tourism sector for Aruba and other Caribbean islands, as one of the biggest market shares of the tourism sector of Aruba. The U.S. market account for approximately 84.0 percent of the tourism industry of Aruba in 2021. (ATA, December 2021, Monthly report December 2021).

The market-share of the TSV from the Netherlands visiting Aruba in 2021 was 4.7 percent. Compared to 2020 this is an increase of 0.4 percentage points. Regarding the European market without the Netherlands included in the market-share this was 2.0 percent in 2021. Latin America accounts for 4.9 percent in 2021.

The positive GDP growth in the U.S. Economy can have a positive impact on the Caribbean region, being one of the most tourism dependent regions in the world. In addition, the war in Europe may also attract more European travelers as they could be choosing a destination far from the war area. This can result in a more positive impact for the Aruban tourism and the Caribbean region. Still the uncertainties in the war where international price developments (inflation) go hand in hand can have a negative effect on traveling to the Caribbean region by becoming a more expensive destination.

Annexes

Annex A: CARTAC and the MARUBA Model

DEACI structurally monitors the economy and advises the Minister of Economic Affairs, Communications, Sustainable Development on current and future economic developments. For analyzing purposes, the DEACI uses a macro- economic model tool, the MARUBA model. This MARUBA Model is based on the National Accounts and reflects the functioning of the Aruban economy, and is used to forecast the macro economic developments of Aruba.

In March and April 2021 an additional Technical Assistance mission (after two Technical Assistance missions in 2020) was held by **The Caribbean Regional Technical Assistance Centre (CARTAC)**. CARTAC is one of ten IMF Regional Technical Assistance Centers (RTACs) located around the world in the Pacific, the Caribbean, in Africa, the Middle East, India and Central America. These Centers were created to help countries strengthen human and institutional capacity to design and implement sound macroeconomic policies that promote growth and reduce poverty.

The objective of CARTAC 's mission with Aruba was to analyze and review the medium-term projections of the MARUBA model before proceeding to publish these projections. During this mission, proposed recommendations for improvement of the medium-term projection of the model were implemented.

Until now the DEACI has only produced the nominal GDP growth and the nominal GDP amounts. Following the war in Ukraine, food shortage, higher energy costs and disruptions in the supply chain worldwide the prices has increased worldwide drastically. Because of these developments, in our next Economic Outlook planned in October 2022 the real GDP figures and its components will be included and published.

Annex B: Economic Outlook 2021-2023

Table 2: Economic Outlook October 2021 compared to the Economic Outlook 2021-2023 June 2022.

Nominal (in %)	Economic Outlook October 2021			Economic Outlook June 2022. Baseline: Including price increase of water and electricity in 2023		
	Estimate 2021	Projection 2022	Projection 2023	Estimate 2021	Projection 2022	Projection 2023
Inflation (%)	0.6	1.5	1.6	0.7	4.3	5.5
GDP at market prices (In M. Afls)	5234	5650	5897	5426	5904	6101
GDP at market prices (%)	13.6	7.9	4.4	17.0	8.8	3.3
Private consumption (%)	3.1	4.3	1.9	4.9	1.6	1.4
Public consumption (%)	-3.9	-1.0	0.8	-5.3	3.2	2.0
Total consumption (%)	0.8	2.6	1.5	1.5	2.1	1.6
Private investments (%)	-8.7	32.0	18.0	7.7	30.1	3.3
Public investments (%)	-39.5	-4.8	0.0	-55.0	28.2	0.0
Total investments (%)	-9.9	31.0	17.6	5.2	30.1	3.3
Export Goods and Services (%)	49.6	19.1	5.5	52.1	27.7	4.8
<i>Export (tourism) (%)</i>	64.1	21.2	6.0	65.1	31.3	4.4
Import Goods and Services (%)	17.9	18.1	5.8	20.2	25.6	3.2
Tourism						
Total Stayover Visitors (number *1000)	828	1063	1119	807	1063	1119
Total Cruise Passengers (number *1000)	102	637	665	136	521	748
Export from Tourism(In M. Afls)	3126	3788	4015	3186	4185	4368

Table created by DEACI using the MARUBA Model, June 2022.

Annex C: Assumptions Outlook 2022-2023

Table 3: Baseline assumptions Outlook October 2021 compared to Economic Outlook 2021-2023 June 2022.

Baseline Assumptions 2022 - 2023		
	2022-Baseline Outlook June 2022	2023-Baseline Outlook June 2022
Stayover Visitors	95% level (2022 vs 2019) 1,062,997 visitors.	100% level (2023 vs 2019) 1,118,944 visitors.
Cruise Visitors	63% level (2022 vs 2019) 520,880 visitors.	90% level (2023 vs 2019) 748,259 visitors.
Ad-Hoc Investment	Calculation with a 50% risk factor for planned projects that as per 2022 did not start construction	Calculation with a 50% risk factor for planned projects that as per 2022 did not start construction.
Average Daily Rate Expenditure non accommodation stayover	ADR +10% vs 2021 Exp. Non Accommodation updated with Q1 Tourism Credits and then projected with historical data	ADR +10% vs 2021 Exp. Non Accommodation aligned with pre-COVID-19 level average growth trend.
Gov. Expenditure	Multi annual budget (DF)	Multi annual budget (DF)
Labor market	Gradually pick up in private sector employment due to up pick in tourism and investment. Average Wages reach pre-Covid-19 level.	Gradually pick up in private sector employment due to up pick in tourism and investment. Average Wages will slightly increase compared to pre-COVID-19 level.
Gov. Financial Support	No	No

Table created by DEACI using the MARUBA Model, June 2022.

