

Summary:

Cruise passenger traffic to Norway – history and forecasts until 2060

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The number of cruise visitors in Norway have increased from about 200,000 to almost 700,000 the last 15 years. The number of cruise ship port calls have gone up from approximately 1200 to 2000, and the number of passengers per ship has nearly doubled in the same time period. The cruise tourism in Norway is growing at about the same rate as in other cruise destination areas in Europe.

The growth rate for number of visitors has been averaging about nine per cent per year; but the growth rate has been unstable, and there are signs of stagnation in 2014 and 2015. The prognoses in the report are based on an assumption of future reduction in annual growth rates, and are depicted in three alternatives: 0.3 per cent, 2.0 per cent, and 3.5 per cent annual growth, respectively. A combination of 3.5 per cent annual growth up until 2028, and then 2.0 per cent in 2028 – 2060, yields an estimate of about two million cruise visitors in 2060, and around 3250 port calls in Norwegian cruise ports.

This report is prepared upon request by Kystverket (the Norwegian Coastal Administration). The main purpose is to work out prognoses for the cruise ship traffic to Norwegian ports until 2060.

The report also contains an overview of the main actors in the cruise market, the “Norwegian cruise product” and the historical development until present day. It also discusses some challenges connected to the operating premises for the cruise sector in Norway, and the cruise operators’ criteria for choice of port-of-call and turnaround ports

Prognoses dealing with such a long time frame as in this case – is undoubtedly linked to a large degree of uncertainty. The report also includes a discussion of the underlying factors of the cruise traffic, as well as the factors that contribute to the uncertainty of the prognoses.

Historical development of the cruise ship traffic in Norway

By definition, a cruise should have at least three different port-of-calls, and not carry commercial freight. A cruise voyage can start and end in the same port (return voyage), or start and end in different ports. The Hurtigruten line (Norwegian Coastal Line) and other scheduled maritime transport (such as ferries to and from Norway) are not defined as cruises, even though is often referred to as such in marketing.

The port statistics from the various ports comprise the base data for cruise traffic statistics in terms of number of passengers and port calls. Based on the port statistics, the marketing organization Cruise Norway produces annual national

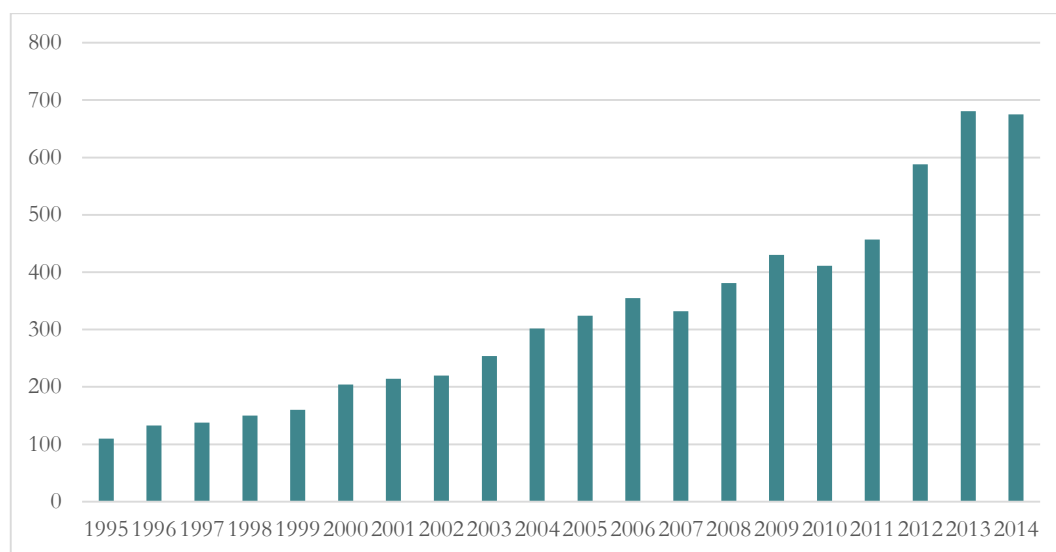
statistics on port calls (since 1993) and passenger arrivals in each cruise port (since 2006).

In 1993 cruise ships called at 29 different Norwegian ports, including Spitsbergen. In 2006 the number was 30, while in 2013 and 2014 37 ports recorded at least one cruise ship arrival.

The number of ship calls for all ports was quite stable at about 1000 from 1993 up to the turn of the millennium. From 1999 until 2005 the annual number of arrivals increased from about 1000 to 1500, followed by a relatively weak growth to nearly 1600 arrivals in 2011. Thereafter, there was a sharp increase up to 1963 arrivals in 2012 and 2070 in 2013. Then in 2014, the number went down somewhat, to 2018 cruise ship calls in total.

The total number of cruise passenger arrivals in Norwegian ports increased from about 1.2 million in 2006 to almost three million in 2013, which equals an annual growth of 14 per cent. However, the number of passenger port visits went down to 2.7 million in 2014.

The number of cruise tourists visiting Norway increased from 110,000 in 1995 to 355,000 in 2006 (figure 1). That equals an annual growth rate of 11.3 per cent from 1995 to 2006.



Source: Institute of Transport Economics

Figure 1 Calculated number of cruise visitors to Norway 1995-2014. 1000 visitors.

From 2006 to 2011 the number of cruise tourists grew with about five per cent annually. From 2011 to 2013 the number of passenger went up with nearly 50 per cent, from 457,000 to 681,000, while there was a small decrease in 2014.

Between 2000 and 2014, there was an annual growth rate of 8.9 per cent in the number of cruise visitors. Average annual growth in the number of ship port arrivals in Norway was considerably lower, 3.8 per cent between 2000 and 2014.

Much of the growth in the number of cruise visitors is due to an increase in the average number of visitors per ship. From 2000 to 2014 the average number of

visitors per ship went up by 5.4 per cent annually, from about 700 in 2000 to 1,400 in 2014.

Regional distribution

Bergen has been the most important cruise port (measured by the number of ship calls) for a number of years (323 ship calls and 443,000 cruise passengers in 2014). Among the eight ports that had more than 100 ship calls in 2014 were four other cities – Stavanger (159), Oslo (129), Ålesund (129), and Tromsø (109). The remaining three were rural destinations Geiranger (203), Flåm /Aurland (149), and North Cape (104).

West Coast destinations dominate in terms of cruise ship port calls in Norway. Almost half of all cruise ports in 2014 (18 of 37) are located on the West Coast. The West Coast harbours increased their share of cruise ship calls from 57 per cent in 1993 to 65.5 per cent in 2014. From 2006 to 2014 the West Coast ports increased their share of passenger visits from 60 to 68 per cent.

Accordingly, the share of cruise ship port calls in Northern Norway went down from 32 to 21 per cent from 1993 to 2014, while the share of cruise passengers (from 2006) has been relatively stable around 15 per cent. Oslo's share of ship calls was growing until 2006, but has since then decreased from 10.4 per cent to 6.5 per cent. The share of passenger visits went down from 17 to nine per cent from 2006 to 2014.

Distribution of nationalities

The growth in the cruise traffic has mainly come from the European market. Germany and Great Britain are by far the most important markets, generating 28 and 26 per cent of passenger visits respectively in 2012. There has also been considerable growth in visitors from France, Spain and Italy. The group of “Other countries” is also dominated by other European nations.

The number of visitors from USA (whom accounted for one third of visitors in 2000), has not been growing for the past 14 years, and equalled just short of 10 per cent in 2014. Visits from potentially large markets in Asia and Russia continues to grow, but are still marginal in terms of share of visitors.

Global cruise development

The global number of cruise passengers was 21.3 million in 2013, while the world total was 9.7 million in 2000. The biggest share of cruise passengers (regardless of destination) comes from North America, 55 per cent in 2013. About 30 per cent come from Europe, and 15 per cent from other continents.

From 2000 to 2013, the number of European cruise passengers has grown considerably faster (nine per cent annually) than passengers from North America (annual growth of 4.2 per cent). Relatively speaking though, the number of visitors from other continents than Europe and North America has grown the fastest.

Caribbean cruises' share (measured by number of berth nights) fell from 48 per cent in 2003 to 36 per cent in 2013. In Northern Europe the cruise traffic tripled from 2003 to 2013, it almost tripled in the Mediterranean, while it quadrupled in the “rest of the world”.

Criteria for choice of port-of-call

Itinerary planning for larger cruise operators with several ships is initially a process where the ships' placement (deployment) throughout the year is decided through a judgement of various aspects, such as region, home port (turn-around port), cruise duration, feasible destinations, the cost of operations, safety and security issues, and so on. Parallel to (or after) this process the cruise operators consider alternative cruise itineraries and which ports-of-call to be included in each cruise. The criteria that influence the choice of ports-of-call can broadly speaking be divided into seven main factors: Well-known destination name, uniqueness of the destination, excursions and activity possibilities on-shore, environmental and security issues, the level of standard of the ports, prospects of future growth, and logistics and economical (profit) concerns.

Even if the destination is deemed sufficient with regards to the six first criteria, matters related to logistics and profitability will be decisive at the end of the day. Use of advanced calculation models have become common in order to evaluate criteria connected the product itself, to the infrastructure, etc. versus demands of cost efficiency and profitability.

For choice of turn-around ports at a larger scale, there are two main demands that need to be satisfied: a substantial regional source market, and an airport with sufficient infrastructure and a wide international flight network.

Turn-around ports have yet not become common in Norway so far. Oslo is the only port that satisfies the demands of airport, flight connections, and a nearby source market, as of today. Charter flight-based turn-around arrangements in Northern Norway will however have a potential for week-long cruises from the European continent to (for instance) North Cape, and opposite, with passenger exchange underway. One operator (Pullmantour Cruises) is for instance launching such an arrangement in 2015, with passenger exchange in Lakselv and Bodø.

Prognoses for the cruise traffic to Norway

In this report both short-term and long-term prognoses are presented, i.e., for the following years: 2018, 2022, 2028, 2040, 2050 and 2060.

The main variable in the prognoses will be the number of cruise visitors. This is the measure that most precisely expresses the market demand, and we are calculating annual growth rates for the number of cruise visitors. The other variable we seek to calculate annual growth rates for, is the number of ship calls in Norwegian ports.

With respect to application of the calculated growth rates, we are using the number of cruise visitors (with at least one visit in Norwegian ports) and the number of port calls in 2014 as the starting point. That is, 675.000 visitors and 2018 port calls.

The availability of long-term prognoses regarding the development of world economy, tourism, and cruise tourism is rather limited. In our prognosis calculations there are mainly three fundamentals in the form of long-term prognoses, which are used as reference frames:

1. OECD's estimates of annual growth in GDP per capita in the OECD-area, along with the so-called BRICS countries, of about two per cent up until 2060.

2. Estimates of international cruise traffic development made by Tony Peisley (2014) for Seatrade Communications Ltd., which yields an annual growth rate of 3.4 per cent up until 2024 and a growth rate of 4.3 per cent from 2024 until 2030.
3. United Nations World Tourism Organisation (UNWTO) – prognoses for international tourist arrivals up until 2030. The number of international arrivals is expected to increase by 3.3 per cent per year between 2010 and 2030. The growth will gradually decline, from 3.8 per cent today to 2.9 per cent annual growth by 2030.

Based on these prognoses the projected development in three scenarios has been calculated for the time period 2015-2060 for the number of cruise visitors to Norway: One “base-level” scenario which yields an annual growth rate of 1.97 per cent; one “high-estimate” scenario with an annual growth rate of 3.49 per cent; and a “low-estimate” scenario based on an annual growth rate of just 0.3 per cent. The estimated development in the number of visitors is shown in Figure 2.

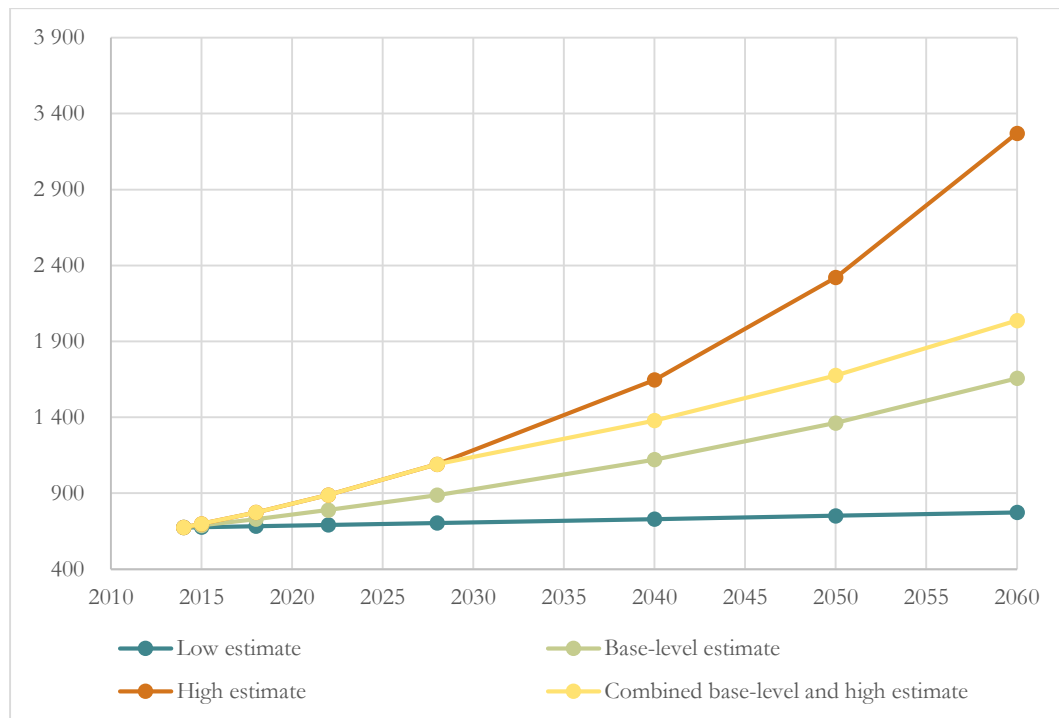


Figure 2 Prognoses for cruise visitor traffic in three scenarios, and the combination of scenario 1 and scenario 2. 1000 cruise visitors.

The base estimate yields about 1.12 million cruise visitors in 2040 and about 1.66 million in 2060. The high estimate yields around 1.1 million cruise visitors in 2028, 1.65 million in 2040 and 3.3 million in 2060; while the low estimate yields an increase of approximately 100.000 cruise visitors up until 2060.

A combination of the base estimate scenario and the high estimate scenario is also presented, which assumes an annual growth rate of 3.5 per cent up until 2028, and then an annual growth rate of 2.0 percent from 2028 to 2060. That corresponds approximately to the annual growth rates in UNWTO’s prognoses for international tourism traffic and Peisley’s growth rates for cruise traffic up until 2028. From then

on until 2060 we assume an annual growth rate in Norway to equal OECD’s prognoses for growth in GDP per capita.

This combination of growth rates means that Norway will reach 1.5 million cruise visitors in 2045, and around two million cruise visitors in 2060.

Short-term cruise traffic development (2018-2022)

The prognoses in the base estimate and the high estimate show a number of cruise visitors between 730.000 and 775.000 in 2018, and between 800.000 and 900.000 in 2022.

We believe the high estimate represents maximum expected traffic also considering a short-term horizon. An expected downturn in 2015 and probable slow growth in 2016 (based on scheduled cruise ship calls) is expected to be followed by several years of high growth, but the visitor number is not considered likely to surpass 775.000 in 2018 or 900.000 in 2022.

The number of port calls in the prognoses alternatives

The cruise traffic data from the ports and from Cruise Norway show that there were 2018 cruise arrivals in Norwegian ports in 2014. The number of cruise ship port calls is highly correlated with the number of cruise visitors, but the observed growth rate is lower – 3.8 per cent vs. 8.9 per cent per year. If we assume that the number of port calls increases in the same relative pace (in relation to the growth in cruise visitors), we will get a development as shown in table 1.

The development in the number of port calls is, however, also connected to the development in the average number of passengers aboard the cruise ships and the number of port visits per ship per cruise. The number of passengers per cruise in table 1 is endogenously determined, that is, they will follow automatically from the calculations of the number of port calls and number of cruise visitors, when we make the assumption that the number of port visits per cruise is held constant (average of 4.24 in 2014).

Table 1 Estimated number of cruise ship port calls in Norwegian ports and the number of passengers per cruise 2018- 2060, in three different scenarios and a combination of the base estimate and the high estimate.

Year	Number of port calls				Number of passengers per cruise			
	Low estimate	Base estimate	High estimate	Combination of base estimate & high estimate	Low estimate	Base estimate	High estimate	Combination of base estimate & high estimate
2014	2018	2018	2018	2018	1418	1418	1418	1418
2018	2028	2087	2141	2141	1428	1483	1533	1533
2022	2039	2158	2271	2271	1438	1550	1658	1658
2028	2054	2269	2482	2482	1452	1657	1864	1864
2040	2086	2509	2964	2745	1482	1894	2355	2130
2050	2113	2729	3437	2985	1508	2118	2863	2381
2060	2140	2967	3985	3246	1534	2367	3479	2661

Given the assumptions of a connection between the growth rate for cruise visitors and the growth rate for number of cruise ship port calls, and a constant number of port calls per cruise, we find the following features regarding the number of port calls in the future in Norwegian ports:

- In the low estimate alternative (S3), with a very low growth rate for the number of passengers, we will get a very slight increase in the number of port calls.
- In the base estimate (S1), the number of port calls will surpass 2500 in around 2040, and increase to almost 3000 in 2060.
- In the high estimate (S2), the number of port calls will surpass 3000 around 2040, and then increase to almost 4000 in 2060.
- In the combination of the base and the high estimate, the number of port calls will surpass 2500 ships in 2030 and reach 3250 in 2060.

There are no restrictions added in terms of the number of passengers per ship in the future in the estimations for the number of port calls. The port calls numbers are relatively sensitive to changes in the assumptions of ship size/passenger capacity; fewer passenger per ship yields consequently more port calls for a given number of cruise visitors.

Most likely, we will probably experience that within the foreseeable future, that the average ship size will converge at 2000 passengers. If we assume that in the base estimate, the number of port calls would be ca. 3500 instead of just under 3000. If one in the high estimate assumes a maximum limit at 2500 passengers, one would have reached 3900 port calls in 2050 and 5500 calls in 2060.

Moreover, if one assumes a maximum of 2000 passengers on average in the combined alternative, one would have reached 3500 port calls in 2050, and ca. 4300 in 2060.

Spread-sheet model

The prognoses are anchored in a spread-sheet model based on a set of assumed main factors deemed likely to influence the growth in the cruise ship traffic up until 2060. Each main factor is given a certain weight parameter, and is furthermore divided into sub-indicators. The sub-indicators are given a certain probability that they (the event/condition) will materialise, and an impact parameter that expresses the assumed impact on the cruise ship traffic, and the direction (i.e., positive or negative). For given values of probabilities, the value assigned the impact parameters, and the main factor weights, the model yields certain growth indexes.

In the base version of the model, probability and impact parameters are calibrated against the three scenarios, that means that the model yields growth indexes corresponding to the annual growth rates in the three scenarios.

Other possible scenarios will appear if one varies the values of the assumed probabilities, impact parameters, or factor weights. The model's main function is thus to act as an instrument to study how changes in the assumptions behind the prognoses will influence the expected annual growth rates in the cruise ship traffic.