

Whole genomic sequencing of the SARS-CoV-2 variants in Sri Lanka

22.01.2022

78 samples were sequenced from 2nd and 3rd week of January and 1st week of January from the community.

Omicron: 75/78. These include a mix of the two main Omicron lineages BA.1 and BA.2.

Delta: 3/75 (please see details below)

Distribution of Omicron sub lineages and locations

BA.1: 56/78: Colombo, Avissawella, Borelesgamuwa, Homagama, Katugoda, Kosgama, Madapatha, Padukka, Parakudawa, Wellampitiya

BA.2: 12/78 : Avissawella, Badulla, Colombo, Galle, Konnewala, Mt Lavinia, Nugegoda and one passenger from India

B.1.1.529: 7/78: Angoda, Colombo, Ruwanwella, Mt Lavinia, Nugegoda, Padukka

Detection of different delta sub lineages and locations:

AY.104 (Sri Lanka delta sub-lineage): 1/78

AY.98: 1/78 Thalangama

B.1.617.2: 1/78 Wellampitiya

Currently 8% of the sequences of Sri Lanka are BA.2, which was named as a variant of interest by the UK Health security agency. [COVID-19 variants identified in the UK - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/covid-19-variants-identified-in-the-uk)

Early analysis has suggested BA.2 has a higher growth rate than BA.1.

BA.2: Does not have the 69/70 deletion and therefore, does not show the S gene target failure (SGTF) like other Omicron variants, by the Taqpath qRT-PCR kit. BA.2 shares 32 mutations with BA.1 but has an addition 28 unique mutations. As BA.2 has more mutations, it is possible that it might be more immune evasive, which is currently being investigated.

Timeline of the emergence and displacement of different variants in Sri Lanka

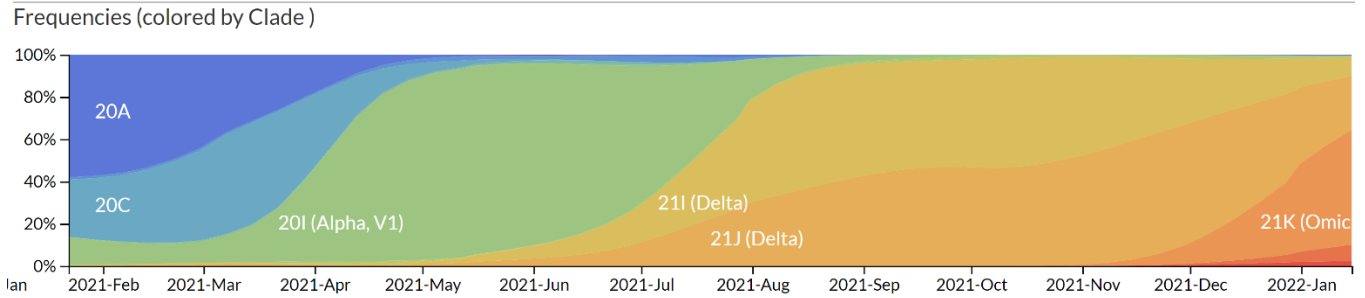


Figure 1: Change in the SARS-CoV-2 variants in Sri Lanka over time. The graph shows changes in the different variants

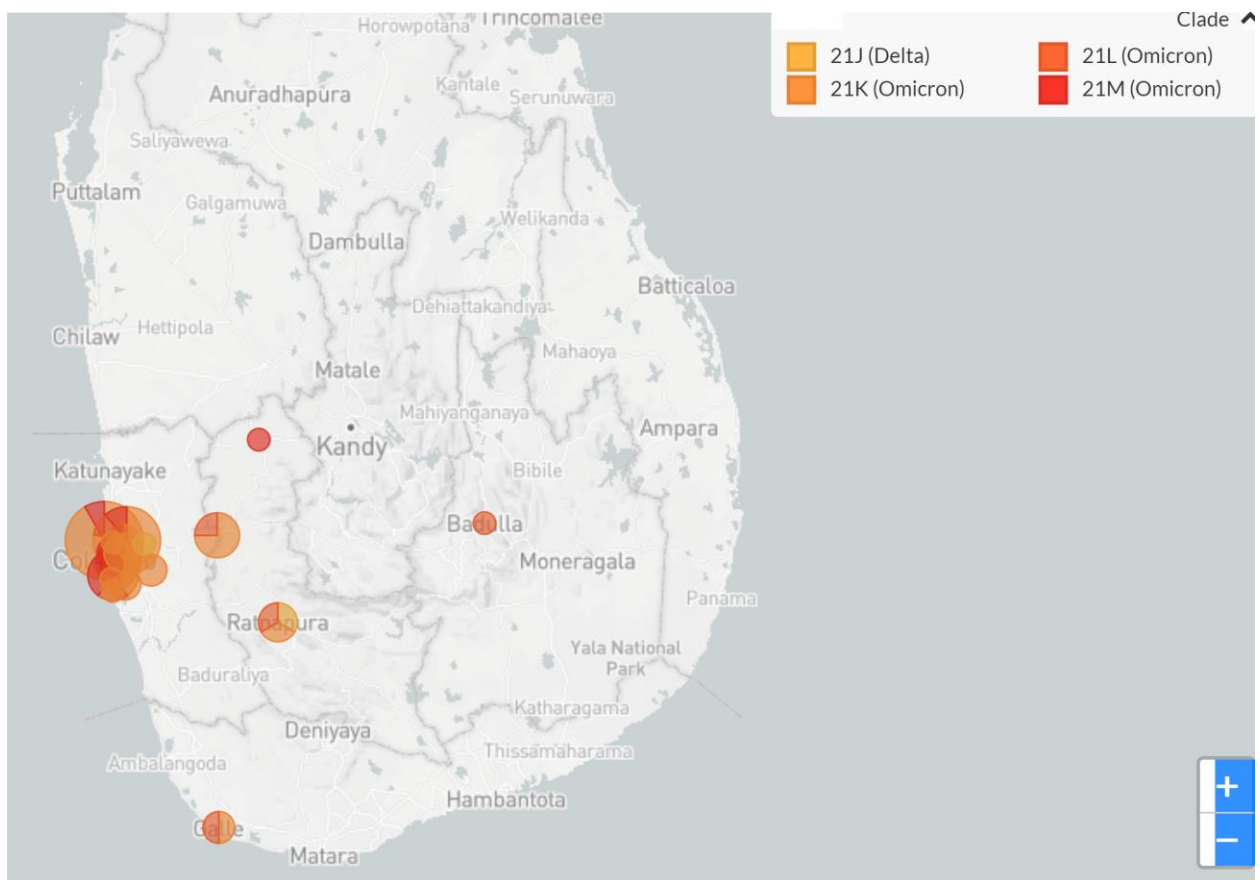
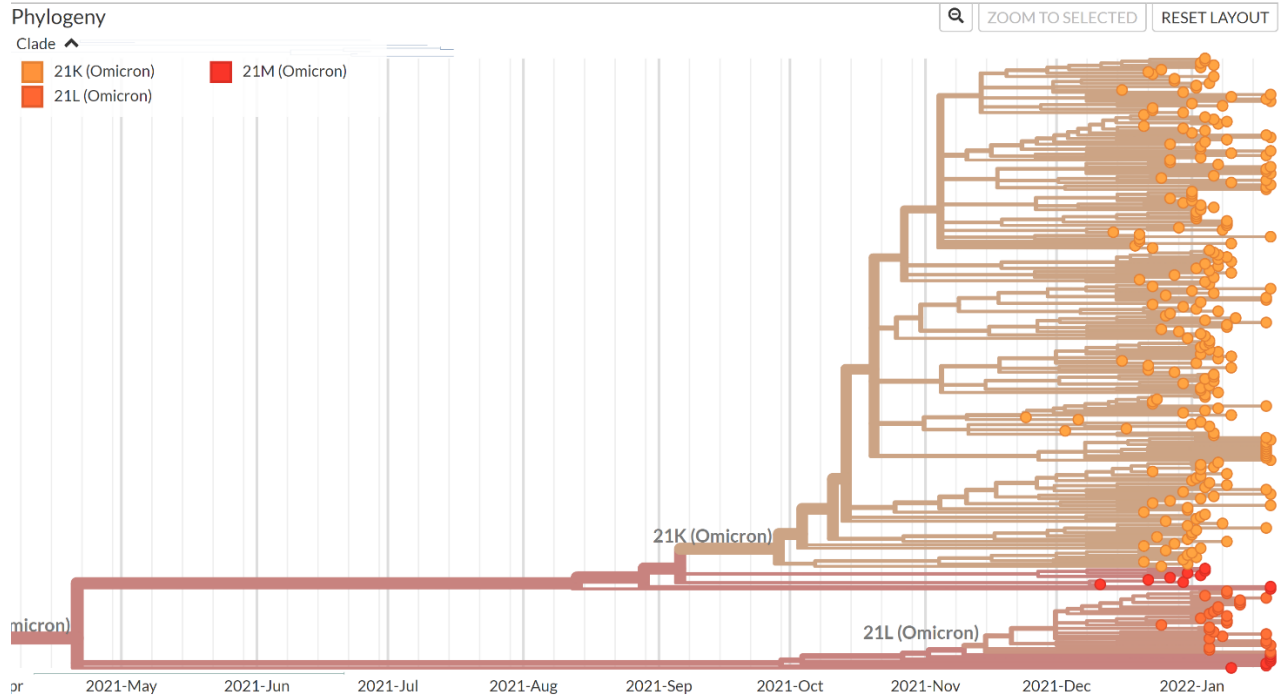


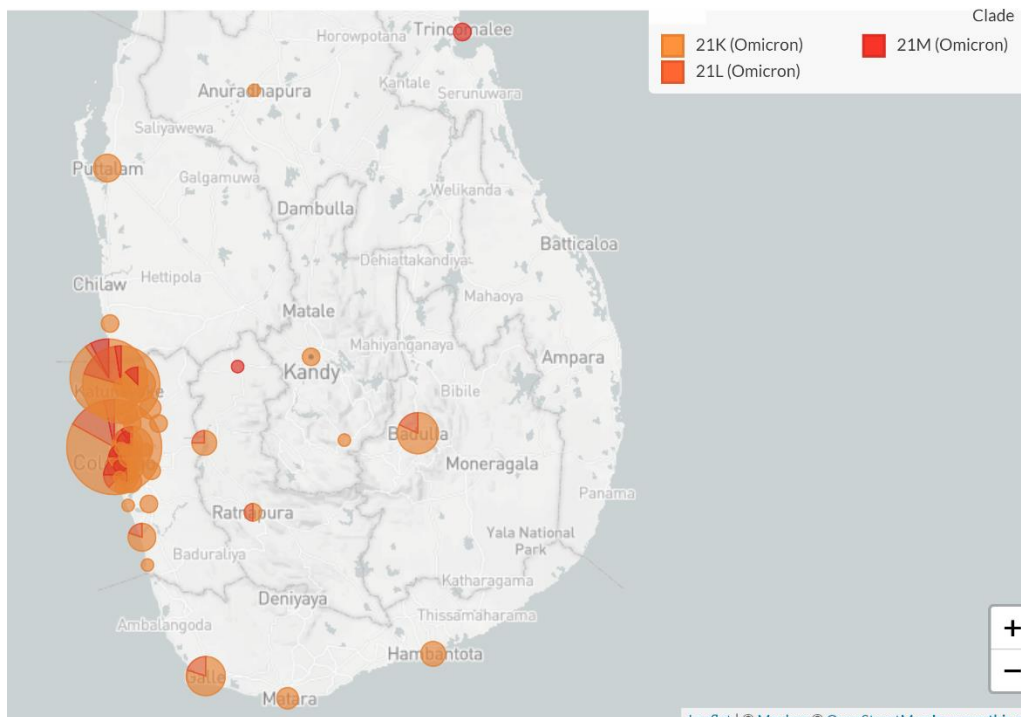
Figure 2: Locations of samples sequenced during the past week (4th week of December and 1st week of January)

Phylogenetic tree of Omicron variants found in Sri Lanka

Allergy Immunology and Cell Biology Unit, Department of Immunology and Molecular Medicine, USJ



Locations where Omicron has been found in Sri Lanka so far



SARS-CoV-2 sequences by variant, Jan 19, 2022

The share of analyzed sequences in the preceding two weeks that correspond to each variant group.

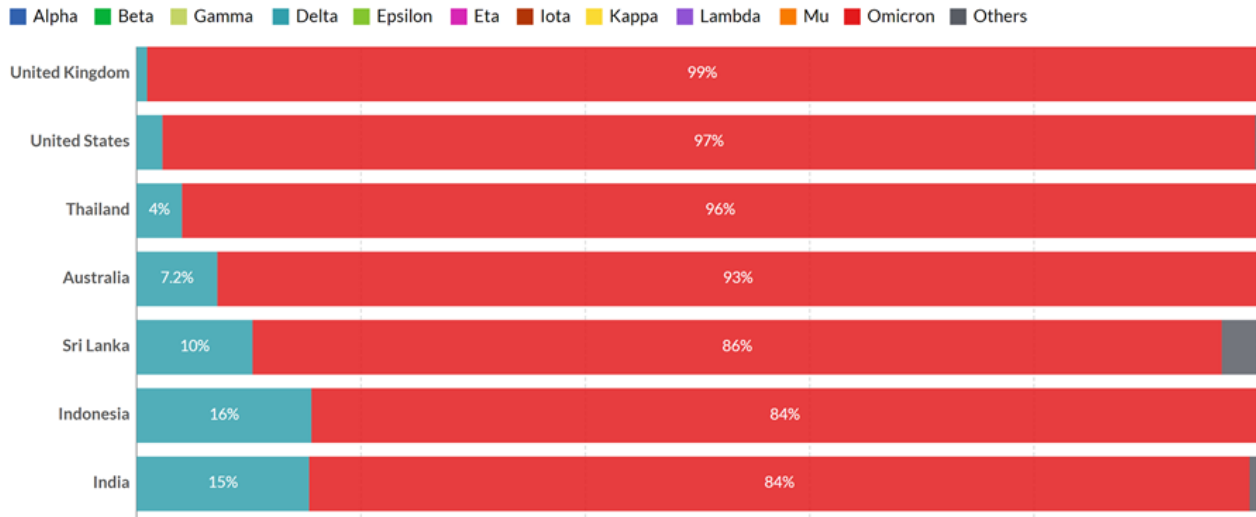
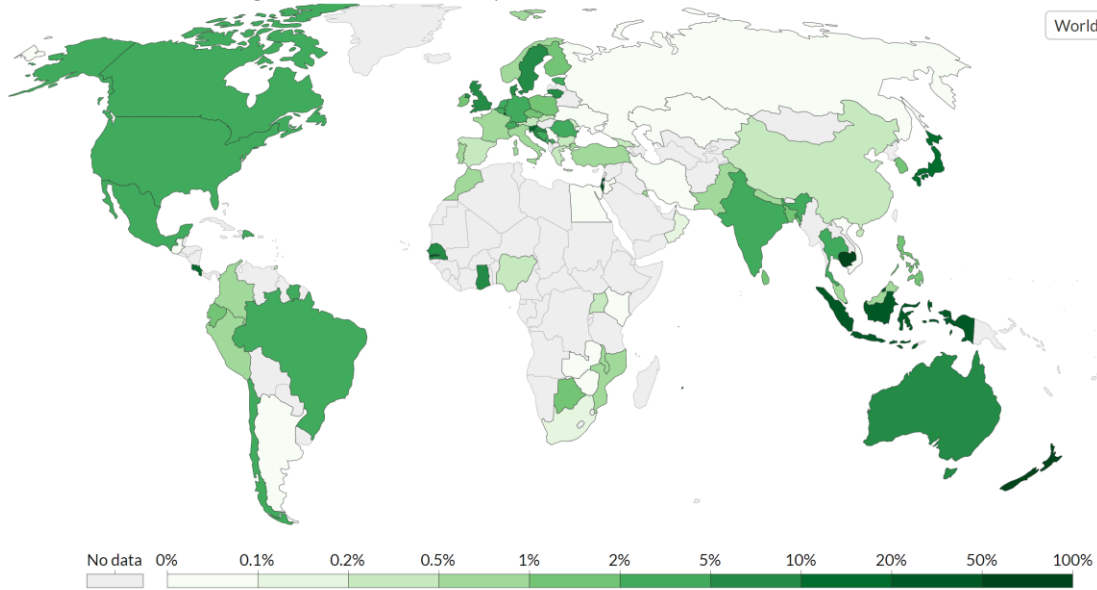


Figure 3: Prevalence of Omicron in different countries in the world based on sequencing data (The current round of SL data does not appear yet in this website)

Share of confirmed COVID-19 cases sequenced, Dec 27, 2021

Share of confirmed cases for which the genome of the virus has been sequenced to determine which mutations it has.



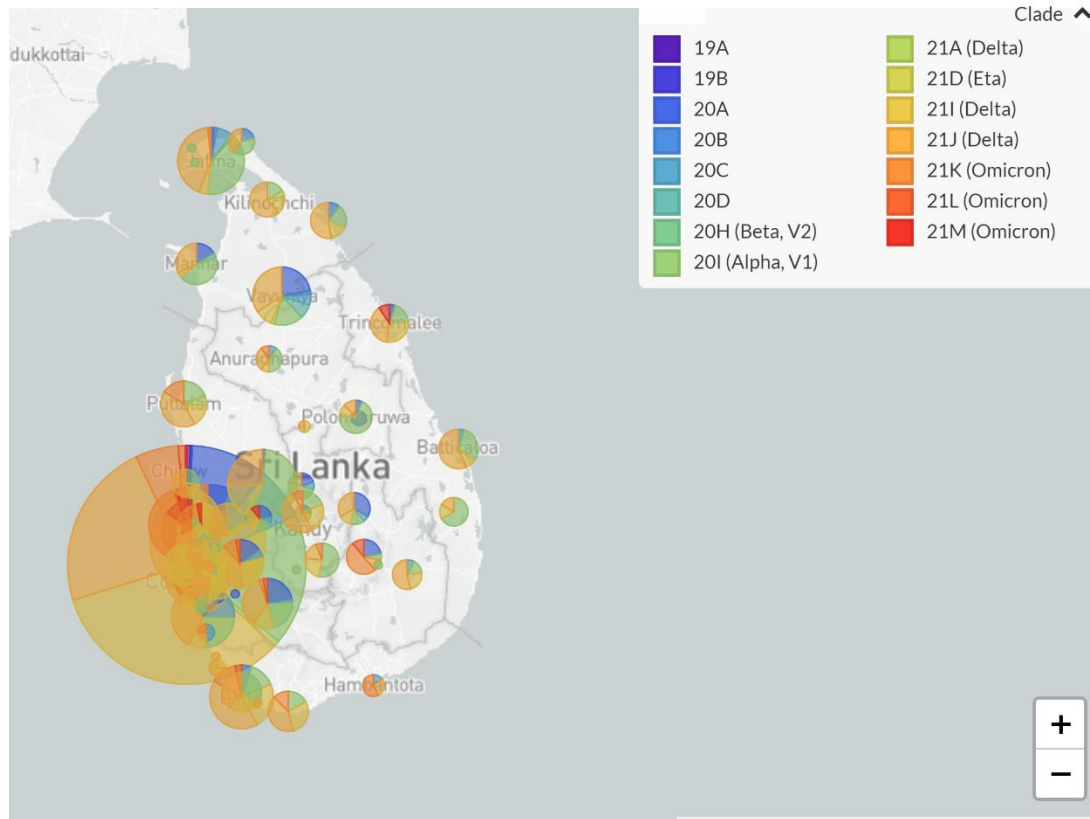


Figure 4: Sequencing of viruses carried out in Sri Lanka so far.

Other variants identified within Sri Lanka: B.1.411: Sri Lankan variant, B.1.1.25, B.1.258, B.1.428, B.4, B.4.7, B.1.1.365, B.1.525, B.1, B.1.1

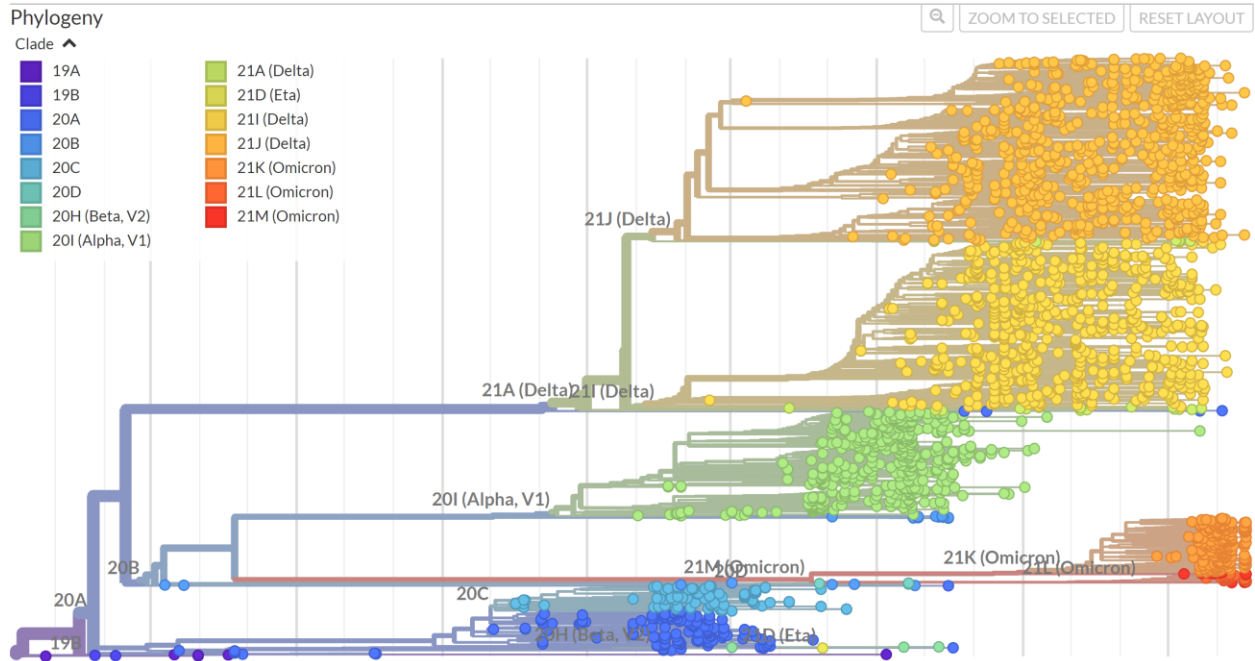


Figure 5: Phylogenetic tree of all SARS-CoV-2 sequences identified in Sri Lanka so far