CLAIMS:

1. A method for decoding a coded video stream, performed by at least one processor, the method comprising:

receiving a coded video stream including video data partitioned into a plurality of layers; and

decoding the video data of the coded video stream, the decoding comprising:

determining whether a first picture of the coded video stream is to be output based on a single syntax element that indicates a mode of output layer set signaling,

the determining comprises determining that the first picture is not to be output based on the single syntax element indicating the mode of the output layer set signaling, and

the mode includes that:

a total number of output layer sets specified by a parameter set is equal to a maximum allowed number of layers in each coded video sequence of the coded video stream referring to the parameter set, an i-th output layer set from among the output layer sets includes layers with layer indices from 0 to i, inclusive, and for each output layer set among the output layer sets, only a highest layer in the output layer set is to be output, or

the total number of output layer sets specified by the parameter set is explicitly signalled, output layers of the output layer sets specified by the parameter set are explicitly signaled, and at least one of the output layers has a reference layer.

2. The method of claim 1, wherein the single syntax element has a value of 0 to indicate the mode of the output layer set signaling.

3. The method of claim 1, wherein the parameter set is a video parameter set.

4. The method of claim 1, wherein the determining comprises determining that the first picture is not to be output based on:

the single syntax element indicating the mode of the output layer set signaling,

a second picture, that belongs to a same access unit as the first picture, being indicated to be output,

the second picture belonging to a higher layer than the first picture, and

the second picture belonging to an output layer.

5. The method of claim 1, wherein the single syntax element has a value of 2 to indicate the mode of the output layer set signaling.

6. The method of claim 1, wherein the determining comprises determining that the first picture is not to be output based on:

the single syntax element indicating the mode of the output layer set signaling,

a value of an identifier of the parameter set being greater than 0, and

a second picture, that belongs to a same access unit as the first picture, being indicated to not belong to any output layer.

7. A system for decoding a coded video stream that includes video data partitioned into a plurality of layers, the system comprising:

memory configured to store computer program code; and

at least one processor configured to receive the coded video stream, access the computer program code, and operate as instructed by the computer program code, the computer program code comprising:

decoding code configured to cause the at least one processor to decode video data of the coded video stream, the decoding code comprising determining code configured to cause the at least one processor to determine whether a first picture of the coded video stream is to be output based on a single syntax element that indicates a mode of output layer set signaling,

the determining code is configured to cause the at least one processor to determine that the first picture is not to be output based on the single syntax element indicating the mode of the output layer set signaling, and

the mode including that:

a total number of output layer sets specified by a parameter set is equal to a maximum allowed number of layers in each coded video sequence of the coded video stream referring to the parameter set, an i-th output layer set from among the output layer sets includes layers with layer indices from 0 to i, inclusive, and for each output layer set among the output layer sets, only a highest layer in the output layer set is to be output, or

the total number of output layer sets specified by the parameter set is explicitly signalled, output layers of the output layer sets specified by the parameter set are explicitly signaled, and at least one of the output layers has a reference layer.

8. The system of claim 7, wherein the single syntax element has a value of 0 to indicate the mode of the output layer set signaling.

9. The system of claim 7, wherein the parameter set is a video parameter set.

10. The system of claim 7, wherein the determining code is configured to cause the at least one processor to determine that the first picture is not to be output based on:

the single syntax element indicating the mode of the output layer set signaling,

a second picture, that belongs to a same access unit as the first picture, being indicated to be output,

the second picture belonging to a higher layer than the first picture, and

the second picture belonging to an output layer.

11. The system of claim 7, wherein the single syntax element has a value of 2 to indicate the mode of the output layer set signaling.

12. The system of claim 7, wherein the determining code is configured to cause the at least one processor to determine that the first picture is not to be output based on:

the single syntax element indicating the mode of the output layer set signaling,

a value of an identifier of the parameter set being greater than 0, and

a second picture, that belongs to a same access unit as the first picture, being indicated to not belong to any output layer.

13. A non-transitory computer-readable medium storing computer instructions configured to cause at least one processor to perform the method according to any one of claims 1 to 6.