WHAT IS CLAIMED IS:

1. A method of decoding an encoded video bitstream using at least one processor, the method comprising:

obtaining a coded video sequence including a plurality of output layer sets from the encoded video bitstream;

obtaining a first flag indicating whether each output layer set of the plurality of output layer sets includes more than one layer;

based on the first flag indicating that the each output layer set includes more than the one layer, obtaining a first syntax element indicating an output layer set mode;

selecting at least one layer from among layers included in the plurality of output layer sets as at least one output layer based on at least one of the first flag and the first syntax element; and

outputting the at least one output layer;

wherein based on the first syntax element indicating that the output layer set mode is a third mode, the at least one output layer is selected from among the layers included in the plurality of output layer sets based on a second syntax element signaled in the encoded video bitstream.

2. The method of claim 1, wherein the first flag and the first syntax element are signaled in a video parameter set (VPS).

3. The method of claim 1, wherein the one layer is selected as the at least one output layer based on the first flag indicating that the each output layer set includes only the one layer.

4. The method of claim 1, wherein a highest layer of the each output layer set is selected as the at least one output layer based on the first syntax element indicating that the output layer set mode is a first mode.

5. The method of claim 1, wherein all of the layers included in the plurality of output layer sets are selected as the at least one output layer based on the first syntax element indicating that the output layer set mode is a second mode.

6. The method of claim 1, wherein based on the first syntax element indicating that the output layer set mode is the third mode, unselected layers from among the layers included in the plurality of output layer sets are used as reference layers for the at least one output layer.

7. The method of claim 1, wherein the output layer set mode is inferred to be the third mode based on the first flag indicating that the each output layer set includes more than the one layer, and a second flag indicating that all of the layers included in the plurality of output layer sets are independently coded.

8. A device for decoding an encoded video bitstream, the device comprising:

at least one memory configured to store program code; and

at least one processor configured to read the program code and operate as instructed by the program code, the program code including:

first obtaining code configured to cause the at least one processor to obtain a coded video sequence including a plurality of output layer sets from the encoded video bitstream;

second obtaining code configured to cause the at least one processor to obtain a first flag indicating whether each output layer set of the plurality of output layer sets includes more than one layer;

third obtaining code configured to cause the at least one processor to, based on the first flag indicating that the each output layer set includes more than the one layer, obtain a first syntax element indicating an output layer set mode;

selecting code configured to cause the at least one processor to select at least one layer from among layers included in the plurality of output layer sets as at least one output layer based on at least one of the first flag and the first syntax element; and

outputting code configured to cause the at least one processor to output the at least one output layer;

wherein based on the first syntax element indicating that the output layer set mode is a third mode, the at least one output layer is selected from among the layers included in the plurality of output layer sets based on a second syntax element signaled in the encoded video bitstream.

9. The device of claim 8, wherein the first flag and the first syntax element are signaled in a video parameter set (VPS).

10. The device of claim 8, wherein the one layer is selected as the at least one output layer based on the first flag indicating that the each output layer set includes only the one layer.

11. The device of claim 8, wherein a highest layer of the each output layer set is selected as the at least one output layer based on the first syntax element indicating that the output layer set mode is a first mode.

12. The device of claim 8, wherein all of the layers included in the plurality of output layer sets are selected as the at least one output layer based on the first syntax element indicating that the output layer set mode is a second mode.

13. The device of claim 8, wherein based on the first syntax element indicating that the output layer set mode is the third mode, unselected layers from among the layers included in the plurality of output layer sets are used as reference layers for the at least one output layer.

14. The device of claim 8, wherein the output layer set mode is inferred to be the third mode based on the first flag indicating that the each output layer set includes more than the one layer, and a second flag indicating that all of the layers included in the plurality of output layer sets are independently coded.

15. A non-transitory computer-readable medium storing instructions, the instructions comprising: one or more instructions that, when executed by one or more processors of a device for decoding an encoded video bitstream, cause the one or more processors to:

obtain a coded video sequence including a plurality of output layer sets from the encoded video bitstream;

obtain a first flag indicating whether each output layer set of the plurality of output layer sets includes more than one layer;

based on the first flag indicating that the each output layer set includes more than the one layer, obtain a first syntax element indicating an output layer set mode; and

select at least one layer from among layers included in the plurality of output layer sets as at least one output layer based on at least one of the first flag and the first syntax element;

output the at least one output layer;

wherein based on the first syntax element indicating that the output layer set mode is a third mode, the at least one output layer is selected from among the layers included in the plurality of output layer sets based on a second syntax element signaled in the encoded video bitstream.

16. The non-transitory computer-readable medium of claim 15, wherein a highest layer of the each output layer set is selected as the at least one output layer based on the first syntax element indicating that the output layer set mode is a first mode.

17. The non-transitory computer-readable medium of claim 15, wherein all of the layers included in the plurality of output layer sets are selected as the at least one output layer based on the first syntax element indicating that the output layer set mode is a second mode.