CLAIMS:

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

based on a number of at least one subpicture of a current picture being greater than one, obtaining a flag indicating whether subpicture partitioning information is explicitly signaled;

based on the flag indicating that the subpicture partitioning information is explicitly signaled, obtaining the subpicture partitioning information; and

decoding the current picture based on the subpicture partitioning information;

the method further comprising:

when the current picture is not a first picture of a Coded Layer Video Sequence, CLVS, for each subpicture of the current picture, if a value of SubpicIdVal[i] of the current picture is not equal to a value of SubpicIdVal[i] of a previous picture in decoding order in a same layer, determining sps_independent_subpics_flag of the subpicture of the current picture is equal to 1, or subpic_treated_as_pic_flag[i] and loop_filter_across_subpic_enabled_flag[i] of the subpicture of the current picture are equal to 1.

2. The method of claim 1, wherein the flag and the subpicture partitioning information are signaled in a sequence parameter set (SPS).

3. The method of claim 2, wherein the number of the at least one subpicture is signaled in the SPS.

4. The method of claim 1, wherein based on a picture size of the current picture being smaller than a size of a coding tree unit of a luma component of the current picture, the number of the at least one subpicture is equal to one.

5. The method of claim 4, wherein based on the number of the at least one subpicture being equal to one, the flag indicates that the subpicture partitioning information is not explicitly signaled.

6. The method of claim 1, wherein the subpicture partitioning information indicates a size of a subpicture from among the at least one subpicture.

7. The method of claim 6, wherein the size of the subpicture comprises a height of the subpicture and a width of the subpicture.

8. The method of claim 6, wherein the size of the subpicture is indicated in the subpicture partitioning information in units of a size of a coding tree unit of a luma component of the current picture.

9. The method of claim 6, wherein a size of another subpicture is determined based on the size of the subpicture indicated by the subpicture partitioning information.

10. 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, based on a number of at least one subpicture of a current picture being greater than one, obtain a flag indicating whether subpicture partitioning information is explicitly signaled;

second obtaining code configured to cause the at least one processor to, based on the flag indicating that the subpicture partitioning information is explicitly signaled, obtain the subpicture partitioning information; and

decoding code configured to cause the at least one processor to decode the current picture based on the subpicture partitioning information;

the program code is further configured to, when the current picture is not a first picture of a Coded Layer Video Sequence, CLVS, for each subpicture of the current picture, if a value of SubpicIdVal[i] of the current picture is not equal to a value of SubpicIdVal[i] of a previous picture in decoding order in a same layer, determine sps_independent_subpics_flag of the subpicture of the current picture is equal to 1, or subpic_treated_as_pic_flag[i] and loop_filter_across_subpic_enabled_flag[i] of the subpicture of the current picture are equal to 1.

11. The device of claim 10, wherein the flag and the subpicture partitioning information are signaled in a sequence parameter set (SPS).

12. The device of claim 11, wherein the number of the at least one subpicture is signaled in the SPS.

13. The device of claim 10, wherein based on a picture size of the current picture being smaller than a size of a coding tree unit of a luma component of the current picture (CtbSizeY), the number of the at least one subpicture is equal to one.

14. The device of claim 13, wherein based on the number of the at least one subpicture being equal to one, the flag indicates that the subpicture partitioning information is not explicitly signaled.

15. The device of claim 10, wherein the subpicture partitioning information indicates a size of a subpicture from among the at least one subpicture.

16. The device of claim 15, wherein the size of the subpicture comprises a height of the subpicture and a width of the subpicture.

17. The device of claim 15, wherein the size of the subpicture is indicated in the subpicture partitioning information in units of a size of a coding tree unit of a luma component of the current picture.

18. The device of claim 15, wherein a size of another subpicture is determined based on the size of the subpicture indicated by the subpicture partitioning information.

19. 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 perform the method as claimed in any one of claims 1 to 9.