WHAT IS CLAIMED IS:

1. A method for limiting the spread of a spill of floating substances spilled into water, comprising:

a) providing a boom comprising at least one uninflated sleeve which comprises inflatable compartments selected from a group consisting of gas-inflatable flotation compartments and water containing compartments;

b) inflating said boom by inflating said flotation-compartments with a gas and by at least partially filling said water containing compartments with water so that pressures exerted between said flotation compartments and said water containing compartments maintains at least some of said flotation compartments and at least some of said water compartments in a fixed geometrical position relative to each other; wherein a width of a floatation compartment is at least 1.25 a height of said floatation compartment, so that in said fixed geometrical position at least some portions of said flotation-compartments extend away from a vertical centerline of said boom; and

c) deploying said boom in water around at least a portion of said spill to limit spread of said spill.

2. The method of claim 1, wherein said at least one uninflated sleeve comprises segments each having at least one inflatable or fillable compartment.

3. The method of claim 2, further comprising interleaving one or more segments of a first uninflated sleeve with segments of a one or more uninflated sleeves prior to completion of said filling and inflating.

4. The method of claim 3, where pressures induced by said filling and inflating hold said interleaved segments in said fixed geometrical position relative to each other.

5. The method of claim 2, further comprising releasing into water a water compartment comprising openings and further comprising a water-absorbent material, thereby causing said water compartment to auto-inflate.

6. The method of claim 2, further comprising utilizing a chemical reaction to create a gas within at least some of said flotation compartments, thereby inflating them.

7. The method of claim 2, wherein the speed of a deployment craft deploying said boom is automatically adjusted according to the speed of production of said boom.

8. The method of claim 2, further comprising selecting, as a function of environmental conditions, pressures of materials used to fill and inflate said compartments.

9. The method of claim 1, further comprising forming a continuous barrier around said spill using said boom and allowing said continuous barrier around said spill to float freely, unattached to anything.

10. The method of claim 2, wherein said boom is color coded according to at least one of a group of color codes consisting of

a) colors indicating standard lengths of boom, to facilitate judging length of said boom from a distance; and

b) colors indicating positions of openable attachments of said boom, to facilitate locating said openable attachments from a distance.

11. The method of claim 2, wherein said interleaved sleeves become semi-rigid when inflated.

12. A boom for containing a floating material spilled in water, comprising a first sleeve which comprises a plurality of gas-inflatable flotation compartments and a second sleeve which comprises a plurality of water-inflatable compartments, said sleeves being so connected that inflation of said air and water compartments forces said flotation and water compartments into a fixed geometrical position relative to each other; wherein a width of a floatation compartment is at least 1.25 a height of said floatation compartment, so that in said fixed geometrical position at least some portions of said flotation-compartments extend away from a vertical centerline of said boom.

13. The boom of claim 12, further comprising a third sleeve which comprises a plurality of water compartments.

14. The boom of claim 12, wherein materials contained in compartments of each of said sleeves, when deployed, are not substantially heavier than water.

15. The boom according to claim 12, wherein said gas-inflatable floatation compartment is wider than it is high, so designed that hydrodynamic forces tend to maintain its wide dimension parallel to surface of water on which it floats, when said flotation compartment is inflated and floating on water; and wherein said geometrical position of said compartments relative to each other comprises an approximately perpendicular position of said water-inflatable compartment relative to said wide surface of said floatation compartment, said geometrical position maintained by inflation forces.

16. The boom of claim 12, containing not more than 1% by volume of material heavier than water.

17. The boom of claim 12, further comprising an end connector manufactured as part of at least one of said sleeves, and useable to connect a boom portion manufactured from one reel of sleeve material to a boom portion manufactured from another reel of sleeve material, wherein said connector is also used as the axis for the boom reel.

18. The boom of claim 12, wherein inflatable compartments in at least one of said sleeves alternate with non-inflatable portions along said at least one sleeve, and said non-inflatable portions are more flexible than said inflatable portions when said inflatable portions are inflated.

19. The boom of claim 12, wherein said boom, exclusive of contained air and water, weighs at most 0.45 kg/meter length.

20. The boom of claim 12, wherein said portions of said flotation compartments, when deployed in ambient water, extend along a surface of said ambient water, said extended portions comprising edges angled downwards when so deployed.

21. The boom of claim 12, further comprising a fillable compartment at least partially filled with water and which is at least partially raised above ambient water level when said boom is deployed in ambient water.

22. The boom of claim 21, wherein said compartment containing water positioned above ambient water level is an extension of a pendent compartment positioned under water, and has a common lumen therewith.

23. The boom of claim 12, comprising at least four extensions of said water-inflatable compartments, at least two positioned below said flotation compartments and at least two at least partially maintained above ambient water level when said boom is deployed in ambient water.

24. A boom for preventing passage of a spilled material floating in ambient water, comprising

a) a flotation device comprising flotation compartments which comprise portions which, when deployed in ambient water, extend away from a vertical centerline of said boom; and

b) a compartment containing water in which at least part of said contained water is maintained by said flotation device above water level of said ambient water; said compartment containing water positioned above said extended portions of said floatation compartments, acting as a weight forcing said portions down.

25. The boom of claim 12, wherein said sleeves are interleaved with each other.

26. The boom of claim 12, wherein when said boom is deployed in ambient water, said water-inflatable compartments are substantially perpendicular to a surface of said ambient water, creating a rigid vertical wall.

27. The boom of claim 12, wherein said sleeve comprises pieces of film, welded together to form said compartments; wherein when said compartments are filled by said gas or water, said sleeve defines a semi-rigid surface.

28. The boom of claim 12, wherein one or both of said sleeves define a substantially flat surface when inflated.

In the claims:

1. A method for limiting the spread of a spill of floating substances spilled into water, comprising:

a) providing a boom comprising at least one uninflated sleeve which comprises inflatable compartments selected from a group consisting of gas-inflatable flotation compartments and water containing compartments;

b) inflating said boom by at least partially filling said water containing compartments by contacting openings in said compartments with water so that mutual pressures exerted between said flotation compartments and said water containing compartments maintain at least some of said flotation compartments and at least some of said water compartments in a fixed geometrical position relative to each other; wherein in said fixed geometrical position at least some portions of said flotation compartments extend away from a vertical centerline of said boom, said portions comprising edges angled downwards; and

c) deploying said boom in water around at least a portion of said spill to limit spread of said spill.

2. The method of claim 1, wherein said at least one uninflated sleeve comprises segments each having at least one inflatable or fillable compartment.

3. The method of claim 2, further comprising interleaving one or more segments of a first uninflated sleeve with segments of one or more uninflated sleeves prior to completion of said filling and inflating.

4. The method of claim 3, where pressures induced by said filling and inflating hold said interleaved segments in said fixed geometrical position relative to each other.

5. The method of claim 2, further comprising releasing into water a water compartment comprising openings and further comprising a water-absorbent material, thereby causing said water compartment to auto-inflate.

6. The method of claim 2, further comprising utilizing a chemical reaction to create a gas within at least some of said flotation compartments, thereby inflating them.

7. The method of claim 2, wherein the speed of a deployment craft deploying said boom is automatically adjusted according to the speed of production of said boom.

8. The method of claim 2, further comprising selecting, as a function of environmental conditions, pressures of materials used to fill and inflate said compartments.

9. The method of claim 1, further comprising forming a continuous barrier around said spill using said boom and allowing said continuous barrier around said spill to float freely, unattached to anything.

10. The method of claim 2, wherein said boom is color coded according to at least one of a group of color codes consisting of

a) colors indicating standard lengths of boom, to facilitate judging length of said boom from a distance; and

b) colors indicating positions of openable attachments of said boom, to facilitate locating said openable attachments from a distance.

11. The method of claim 3, wherein said interleaved sleeves become semi-rigid when inflated.

12. A boom for containing a floating material spilled in water, comprising a first sleeve which comprises a plurality of gas-inflatable flotation compartments and a second sleeve which comprises a plurality of water-inflatable compartments, said sleeves being so interleaved that inflation of said air and water compartments forces said flotation and water compartments into a fixed geometrical position relative to each other; wherein in said fixed geometrical position at least some portions of said flotation compartments extend away from a vertical centerline of said boom.

13. The boom of claim 12, further comprising a third sleeve which comprises a plurality of water compartments.

14. The boom of claim 12, wherein materials contained in compartments of each of said sleeves, when deployed, are not substantially heavier than water.

15. The boom according to claim 12, wherein said gas-inflatable floatation compartment is wider than it is high, so designed that hydrodynamic forces tend to maintain its wide dimension parallel to surface of water on which it floats, when said flotation compartment is inflated and floating on water; and wherein said geometrical position of said compartments relative to each other comprises an approximately perpendicular position of said water-inflatable compartment relative to said wide surface of said floatation compartment, said geometrical position maintained by inflation forces.

16. The boom of claim 12, containing not more than 1% by volume of material heavier than water.

17. The boom of claim 12, further comprising an end connector manufactured as part of at least one of said sleeves, and useable to connect a boom portion manufactured from one reel of sleeve material to a boom portion manufactured from another reel of sleeve material, wherein said connector is also used as the axis for the boom reel.

18. The boom of claim 12, wherein inflatable compartments in at least one of said sleeves alternate with non-inflatable portions along said at least one sleeve, and said non-inflatable portions are more flexible than said inflatable portions when said inflatable portions are inflated.

19. The boom of claim 12, wherein said boom, exclusive of contained air and water, weighs at most 0.45 kg/meter length.

20. The boom of claim 12, wherein said portions of said flotation compartments, when deployed in ambient water, extend along a surface of said ambient water, said extended portions comprising edges angled downwards when so deployed.

21. The boom of claim 12, further comprising a fillable compartment at least partially filled with water and which is at least partially raised above ambient water level when said boom is deployed in ambient water.

22. The boom of claim 21, wherein said compartment containing water positioned above ambient water level is an extension of a pendent compartment positioned under water, and has a common lumen therewith.

23. The boom of claim 12, comprising at least four extensions of said water-inflatable compartments, at least two positioned below said flotation compartments and at least two at least partially maintained above ambient water level when said boom is deployed in ambient water.

24. A boom for preventing passage of a spilled material floating in ambient water, comprising

a) a flotation device comprising flotation compartments which comprise portions which, when deployed in ambient water, extend away from a vertical centerline of said boom, said portions comprising edges angled downwards; and

b) a compartment containing water in which at least part of said contained water is maintained by said flotation device above water level of said ambient water, said compartment containing water positioned at least in part above said extended portions of said floatation compartments, acting as a weight forcing said portions down.

25. The boom of claim 12, wherein when said boom is deployed in ambient water, said water-inflatable compartments are substantially perpendicular to a surface of said ambient water, creating a rigid vertical wall.

26. The boom of claim 12, wherein said sleeve comprises pieces of film, welded together to form said compartments; wherein when said compartments are filled by said gas or water, said sleeve defines a semi-rigid surface.

27. The boom of claim 12, wherein one or both of said sleeves define a substantially flat surface when inflated.

28. The boom of claim 24, wherein said compartment containing water comprises a compressed sponge for absorbing water.

29. The method of claim 1, wherein a width of said flotation compartment is at least 1.25 a height of said flotation compartment.

30. The boom of claim 12, wherien a width of said flotation compartment is at least 1.25 a height of said flotation compartment.