Kitesurfing Mini Guide

ASD KiteGeneration

Kiteschool in Cagliari, Sardinia (Italy)

www.kitegeneration.com

info@kitegeneration.com

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1. Introduction

For **kiteboarding in safety**, it is necessary to attend a Kitesurfing course with an instructor that can bring you to an indipendent and safe level and to know theoretical information about:

- the environment in which you will kitesurfing,
- the kite equipment,
- the rules to be followed in order to prevent accidents, damages and dangerous situations.

In this kitesurfing guide you can find useful info for anyone interested in **learning to kitesurf** and great advice on how to go about lerning how to kitesurf safely.

Guide has been made by **KiteGeneration, Kiteschool** in Cagliari, Sardinia (Italy), for people that are attending a **kitesurfing course**.

- Website: www.kitegeneration.com
- Email: info@kitegeneration.com
- Tel: +39 327 5376016

2. Safety rules to be followed

The **kiteboarding** is a wonderful sport that can be dangerous if you don't know and/or respect some **basic rules** of sailing and if you don't **practice kiteboarding** in the right conditions.

If you like to start with kiteboarding, a **kitesurf course** with a qualified instructor should be attended in order to be **self independent** and following **safety rules** should be respected.

2.1. Preliminary checks

- **Never go alone for kiteboarding**: have kitesurf with a friend should be nice for the company and helpful for sharing tips and for mutual helping and support
- **Find out about the regulations on regional and municipal ordinances** and on local customs, especially with regard to the safety devices required (quick release, leash, life jacket, helmet, etc.)
- **Know the kitesurfing spots** and check the accessibility of a downwind point to be used in case of leeway
- Always **check the weather forecast** to know the intensity and direction of wind in order choose witch is the best spot for kitesurfing. Important: **avoid to kiteboarding with Offshore wind**, unless a launch and recovery service is available
- **Choose the right kite size according to the wind**. In case the intensity is unclear, get the wind intensity with an anemometer. Never kitesurfing with an oversized kite
- **Arm the kite carefully** and check if safety systems (Kite Quick release and quick release of the leash) are well working
- **Never arm / run / land in unsafe conditions** (avoid the presence of obstacles / bathers / other kites in the area you are kitesurfing)
- When not in use, do not leave your kite unattended on the beach.

2.2. Phase of take-off and landing

- The majority of **accidents during kitesurfing** happen when the kite is on the beach, during the takeoff or in the moments before the entry into the water: in those moments it is necessary to pay close attention.
- **Re-check that lines are well armed** before the kite take-off

- **Get help just from experienced kiters** and use the appropriate signals for take-off and landing the kite
- **Do not take-off the kite in the presence of obstacles** (people, animals or things) and be carefull to have a safe distance downwind (if it is possible at least twice the length of the lines)
- **Do not stay on the beach with the kite in flight** longer than the strictly necessary time for entry in the water

2.3. While sailing

- **Do not go in the water alone**: better to be kept under control by someone or bring a device to call for help in case of need (e.g. a mobile phone)
- **Monitor the weather conditions** and any changes on wind direction and intensity
- **Maintain a safe distance from other kitesurf**, windsurf, boats of all kinds, swimmers and obstacles in general
- **Be aware of yur limits and possibilities**: sail according to your level of experience
- **Don't go away from the beach too far**: the distance from the beach should allow you to easy return In case of problems.

3. Outlines on wind

For kitesurfing you need to be able to recognize **wind speed** (wind intensity) and **wind direction**.

For measuring the **wind intensity** an anemometer can be used. In addition, the experience can help you to evaluate by yourself the wind speed with a good approximation.

In order to determine the **wind direction**, various signals (as the movement of the trees, the ripples of waves, the flags, the shape of the clouds) can be observed.

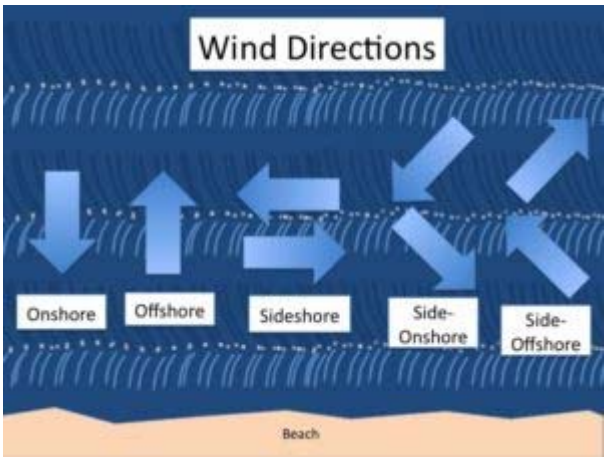
The ideal conditions for kiteboarding are those in which the **wind blows tilted from the sea towards the land** (side onshore): in this situation even if the board should be lost or if the kite should land in the water, the wind will take us back to the beach.

Even **the wind parallel to the beach** (side shore) is a good condition for kitesurfing. In this case, however, we must take into account that if the kite should land in the sea and we will be not able to relunch it, the wind will drag us parallel to the beach: in order to get back to the beach we need to stay close to it and know the basic techniques of self rescue.

The **wind that blows tilted from land to sea** (side offshore) tends to take us off from the beach: in this case we can kitesurfing if we are in a gulf (so we are sure to reach somewhere the land) or if we are assisted by a recovery boat service.

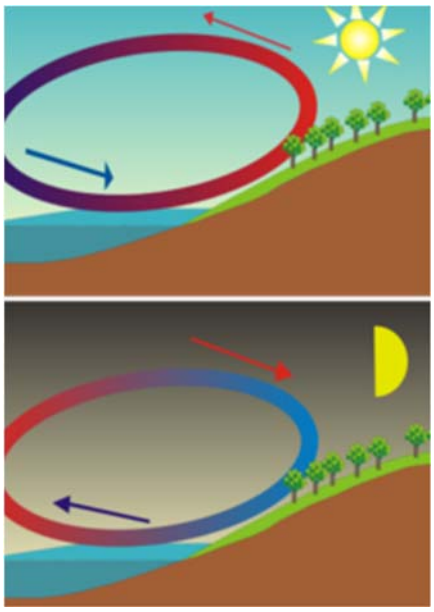
The **wind that blows from the sea to the land (onshore wind)** is not easy because in case of any problem with the kite, we will be immediately dragged to the beach, where the risk of collision with the ground, trees, people, various obstacles is high.

It is absolutely **dangerous** kitesurfing with a **wind blowing from the land to the sea (offshore wind)** if it is nor available a recovery boat service, because in case of any problem we don't have the possibility to retourn back to the beach.



3.1. The winds in Sardinia

In Sardinia, the most frequently winds coming from weather perturbations are the **Mistral** (wind from north-west) and **Sirocco** (wind from South-East).



In Cagliari (at Poetto beach and in the close areas), **from April to October**, during the hottest days and in the absence of weather perturbations, a "**thermal wind**" (or "**sea breeze**") in blowing from sea to the land.

The **thermal wind is a local perturbation** originated by the difference in temperature of the air above the sea (cold air) and the air on the land (warm air): the warm air present above the land is "going up" leaving an empty space that is "filled" by the cold air present on the sea; at the same time thee empty space created above the sea after the moving of air is filled by a colder air present at higher levels (descending air); all the air movement is cyclical and gives the breeze.

3.2. The wind rose

The "**wind rose" shows the directions** and the names of the major winds that blow from the four cardinal points (north, south, east and west) and from the intermediate points (north-east, south-east, south-west and north-west).

The names of the winds arise from their direction of origin supposing our position is on the Zante island, on the Ionio Sea: Libeccio from Libya, Grecale from Greece, Mistral from Rome, "the master city"):

- **TRAMONTANA (NORTH): MODERATE CHILL WINDL, BRINGS COLD**
- **GRACALE (NORTH-EAST): STRONG WIND, USUALLY DOES NOT BRING RAIN**
- **LEVANTE (EAST): HOT AND HUMID WIND**

- **SCIROCCO (SOUTH-EAST): WARM WIND, OFTEN BRINGS RAIN**
- **OSTRO (SOUTH): WARM WIND**
- **LIBECCIO (SOUTH-WEST): GUSTY AND HOT WIND**
- **PONENTE (WEST): FRESH WIND**
- **MISTRAL OR MAESTRALE (NORTH**-West): cold wind, often gusty

4. Reachs (ways) and maneuvers

In all the sailing sports, it is easier to move with the wind (down-wind) rather than move against the wind (up-wind).

However, if we start from the beach we need to get back to the same point of the beach we have started; therefore it becomes necessary to lose less space as possible in the wind direction.

The beam reach (traverso) is the way at 90°with respect to the wind direction.

The stern wind (andatura di poppa) is the way in the direction which the wind blows.

The intermediate way between the beam reach and the stern wind is the **broad reach** (andatura di lasco).

The most important reach in sailing, that make us autonomous and allows us to return back to the same point we started from the beach, is the **close hauled** (bolina).

In the keteboarding, as in all the sail sports, it is impossible to move against the wind, but we can reach a point upwind beatining (bordeggiando), ie alternating sides of close hauled to right and left ("zig-zag movement upwind") with at an angle with the wind of approximately 45 degrees.

Tack (mura) is the nautical term that indicates the side of the sailboat from which the wind comes. More specifically in the sailing it says **starboard tack** (mura a dritta) when the wind blows from the right side and **port tac**k when the wind blows from the left side.

In the sailing, the change of tack is made by a **tack** (virata), in which the **bow** (prua) of the boat move in the wind direction, or by a **jib**e (stramabta), in which te **bow moves away from the wind**. **In Kiteboarding** we don't always use tables characterized by bow and stern (unidirectional boards like a surf) and then, considering that generally we use bidirectional boards, we say simply **change of direction**.

The leeway (scarroccio) is the phenomenon that makes us move downwind in respect to the desired way; it is due to the power that the kite acts in the wind direction. We make leeway also even when we are stopping in a position with the kite above our head (at the zenith, for example when we are in preparation for the water-start, situation that makes lose a lot of space to the beginners.

5. Kitesurfing Equipment

The Kitesurfing equipment consists of 4 main items (plus the pump required to inflate the inflatable kites):

1. **kite,**
2. **bar and lines,**
3. **board,**
4. **harness.**

5.1. Kite

The kite can be divided into two main categories:

1. **Foil Kite**: This kind of kites, which inflates automatically with the wind, is powerful and lightweight but slow. Foil kites are not recommended for using on the sea because, when falling on the water, they will fill up with water and the re-launching of kite is compromised
2. **Pump Kite (inflatable kite)**: Equipped with inflatable bladders, pump kites are the most suitable for using on the sea because they can be easily re-launched, they are easily visible and they constitute a good lifesaver in case of need.

The pump kites, depending on their shape, are divided into:

1. **C-kite** that have a C-shape
2. **Bow kite** that have an arc shape; they are equipped with bridle for connecting the lines, have a total de-power system and a wind range much wider than the C-kite.

All types of kite can have different sizes. These sizes are indicated by a number that roughly represent the kite surface in square meters. If we consider a "fix" wind intensity, with the increasing of the kite size the power of the kite increase too but it decreases the speed and handling.

Each brand of kite recommends a wind range in which a kite of a specific size can be used.

Given the cost of kites (the cost for a complete new kite gear is around 1800 €), we must carefully choose the correct size according to the wind "average" present in our area to our weight.

In Sardinia, where our school is located, in general:

- if we have a weight of about 75 kg, the most suitable size to buy is "10",
- if we have a weight of about 50 kg, the most suitable size to buy is "8".

NOTE: IN THIS MINI BOOK WE WILL REFER TO LAST GENERATION PUMP KITE

5.2. Bar and lines

The bar, which has a width of about 50 cm, and the lines allow us to control the kite.

The lines (which are in Dyneema or Spectra and have a strength from 150 to 350 kg for each line), through which the kite is controlled and connected to our body, are normally four:

1. Two (2) are the "front-lines"; these lines, that connect the front part of the kite to our body through a rubber ring (chicken loop) and the harness, transmit us the power of the kite
2. Two (2) are the "back-lines"; through these lines, that connect the back part of the kite to the bar, allow us to control the kite.

Since the length of the lines is usually around 25 meters, for fitting, launching and landing the kite is necessary to have around us a free space consistsing in a semi-circle with a radius minimum of 25 meters, in order to avoid the risk of cause damages to others, to ourselves and to the equipment.

5.3. Harness

The harness allows us to connect our body to the kite.

It consists in a soft part that wraps around the abdomen and a metallic part (hook) to connect the "front lines" through the chicken loop.

5.4. Board

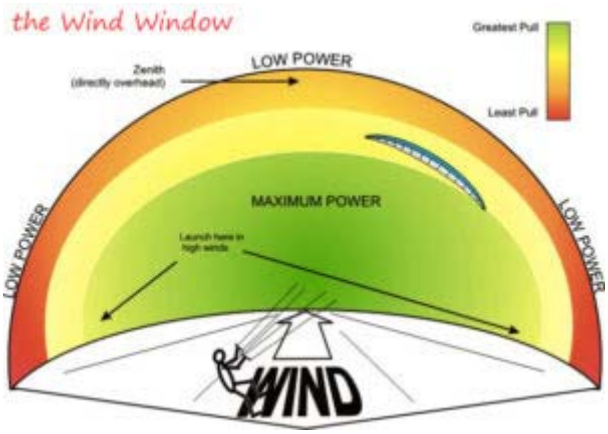
The kite-boards can be of two types:

1. one-way boards : These kind of boards have a **bow** and a **stern** and are typically used for surfing the waves. These boards are used always in the same direction.
2. Bi-directional boards (Twin tip): These boards are symmetrical, very easy to handle and compact (they have a size between 120 to 160 cm in length). With these boards the sailing direction can be changed simply reversing the direction of the kite without moving the feet.

IMPORTANT:

- Don't forget home anyone of these 4 kitesuf components (kite, bar and lines, board, harness), otherwise your kiteboarding day will be over before to start J

6. The Wind Window



The **wind window** is the area where we fly our kites. Every kiter needs to understand it.

We use parts of the wind window to keep our kites when we don't want any power, and we use other parts when we need to get power. There are two main parts, and one intermediate part that make up the wind window:

1. Making the kite fly to our right, to our left or above our head, the kite always stops in a point which marks the limit of the wind window: this limit is called **the edge of the window**. The Edge of the window is the area where the kite has the least amount of power because of the low incidence (angle) with the wind. Here you will "park" your kite when you do not want much power, when you are taking a rest, putting on your board, or launching and landing. The point on the edge of the window that is directly above our heads is called the **zenith**.
2. **The Power Zone** is the area of the wind window where the incidence (angle) wind-kite will increase up to the maximum (the pull of the kite is increasing in parallel). In this area your kite is moving the fastest and catches the most wind (this creates an extreme amount of power). Here is where you create the pull you need to kiteboarding and to do cool tricks.
3. The **Intermediate Zone** is the area between your shoulders (the edge of the window) and the power zone. When flying in this zone the kite begins to build up speed, which increases its power. In addition, the kite catches more wind, which adds even more power. These two things combined can create a lot of power in the kite.

The kite produces different amounts of power in each zone, so we use them all for different purposes.

To find the wind window do this:

- Stand facing downwind, with your back to the wind.
- Extend your hands out sideways.

- Imagine lines extending out of your hands horizontally and above your head vertically: the window is the area downwind you and it ends when it meets these lines.

The wind windows is so an **imaginary quarter of a sphere** whose the radius is given by the length of the lines and whose the center is the kiter.

7. Arming a kite

For arming a kitesurf in a safe and proper way, you have to follow the operations/instructions here below listed:

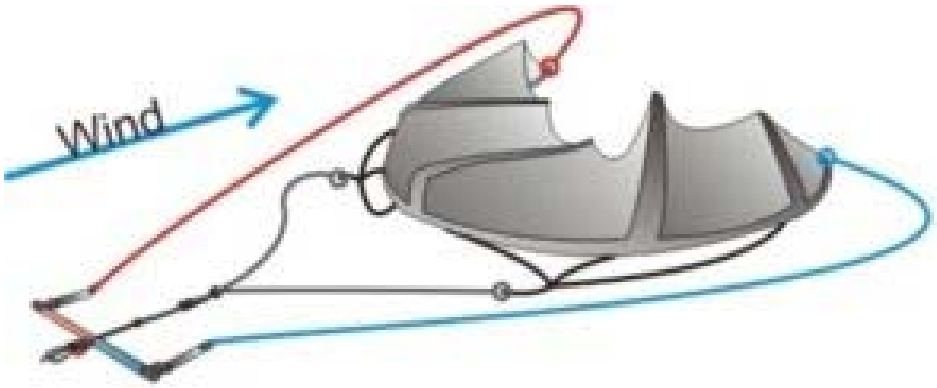
1. Choose a space (a semi-circle with a minimum radius of 25 meters) free from any kind of obstacles
2. Unroll your kite, lay it on its back (the part where you can find the valves, struts and leading edge) in transversal position to the wind
3. Pay attention on bridles, be careful that they are not twisted
4. Connect the pump leash to the kite
5. Connect the pump to the kite valve (the modern kites have a one pump system that allows us to inflate all the kite from the main valve)
6. After your feet are on the pump, inflate the kite
7. Once the kite is pumped hard (It is common for beginners to under-inflate their kites; this will affect the kite's flying characteristics), remove the pump leash (do this operation getting the kite from the leading edge) and place it with the leading edge (the blown up spar that spans the length of the kite) face down into the sand. Get and turn the kite just from the leading edge; if you touch/get it from the fabric it can be tear. The leading edge must be always upwind in respect to the trailing edge. Put san sand on the kite if the wind is strong
8. Get the bar and, starting from the kite and moving upwind, lay out the lines as you go; once you have laid out all the lines, place your bar on the sand and place it into a position so that you are ready to go (the chicken loop should be upwind of the bar). Make sure the left side of bar is on the left
9. Starting from the bar and walking downwind towards your kite untangle the lines keeping them in the hands between the fingers (suggestion for the beginners: we recommend to separate one line per time)
10. Be sure, once more, that the bridles, where the lines should be connected, are not twisted
11. Connect the lines to the bridle through the lark's head knot: the front-lines must be connected to the bridle placed in the leading edge; the back-lines (external


Nodo a bocca di lupo

lines) must be connected to bridles placed at the ends of the trailing edge

Tips:

- The mistakes on lines connection are the most commune causes of accidents: to have the front-lines and back-lines twisted means you have an uncontrollable kite. Suggestion: have always a double check on lines walking from the bar to the kite and vice versa.
- To move an inflated kite from one point to another when the lines are not yet connected, you have to get the center of leading edge (this must be upwind in respect to the trailing edge) and with the surface with valves and struts facing up: in this way the kite is totally unloading and easily manageable.



Kite with lines correctly installed

8. Take-off and landing a kite

Take-off and landing of a inflatable kite will always take place in the edge of the wind window with the help of an assistant that will held the kite in a vertical position. In the edge of the wind window the kite is almost neutral and we feel only a slight pull while our assistant will not do any effort to keep the kite in the take-off position.

8.1. Take-off

In order to properly and safely launchng a kite, you must follow the operations/instructions listed here below:

1. It is better to launch the to the water, where the wind is free from obstacles and therefore less gusty and where, in case of falls the impact will be less dangerous
2. Before to launch the kite re-verify that no obstacles (objects and people) are present downwind to us and to the kite
3. Connect to the kite through the chicken loop. Don't forget to lock the chicken loop to the hook of your harness through the finger and to attach the safety leash
4. Get the bar and move in that position that make the kite is in the edge of the wind window
5. The person that is helping us (the helper) should pick up the kite in the centre of the leading edge and flip it on its back and take it to the position for launching (the helper should stay always back to the kite and upwind in respect to it) and the leading edge upwind in respect to the trailing edge
6. After slightly pulling the lines, do a final check on your lines and ensure they are not tangled in any way. If they are tangled, signal to the launcher to place your kite back down. There is no easy way to untangle the lines safely, it is best to disconnect your lines and start again (disconnect, walk through from the bar to the kite, reconnect).
7. If the lines are well connected, move slightly against the wind in order to gradually send the kite in a power zone

8. Once you reach the area of needed power needed for launching the kite, give the signal to launch (thumbs up) to the helper that will release the kite gently (he should NOT throw it up). At the same moment the helper will leave the kite, we must direct it slowly to the zenith. Supposing that helper is keeping the kite on **STARBOARD TACK**, for launching the kite we will use just the left hand (see photo at right)!

IMPORTANT:

- In the launching operations, the helper is helping us to put the kite vertically in order to facilitate our launching. He should not move the kite in that we consider the correct position for launching the kite but we should move in the correct position!

8.2. Landing phase

When we want to land the kite, we should:

1. sign it at an helper (conventional sign is an open hand above our head)
2. slowly send down the kite along the edge of the wind window until it touches the ground. In this position, the partner is able to grab the kite for the leading edge and place it on the ground.
3. Once you have landed, secure the kite by ensuring it is in the right position, weighted down (sand or board) and disconnect from the lines.

9. Kite Control

The kite fly in the wind window and are handled by the kiter by a bar where the back-lines are connected.

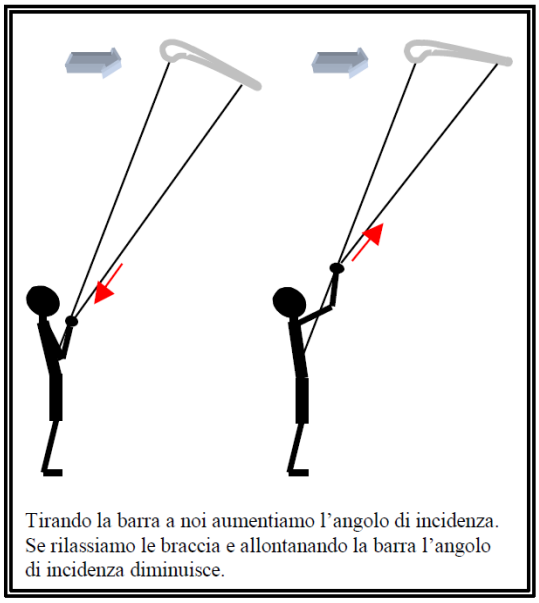
When we pull the bar to the left, the kite goes left, when you pull to the right, the kite goes right.

For example, if the kite is flying to the bottom right, pulling the left side of the bar, the kite will rotate to the left changing direction and flying to the zenit. Once the kite will pass the zenith, it will fly in the bottom left direction. At any point during this movement, simply pulling the bar to the right (with an appropriate intensity), we can keep the kite in the reached position or reverse the flying direction.

10. De-power System

The de-power system allows us to control the power of kite.

Remember that, while we are connected to the kite via the front-lines/chicken loop/harness, the bar, tah is connected to the back lines, is free to run up and down: when we pull or release the bar we are just changing the angle of incidence wind-kite, giving respectively more or less power; that possibility to slide the bar changing the angle of incidence wind-kite changing the power that the kite gives us, is called "de-power system".



Tirando la barra a noi aumentiamo l'angolo di incidenza. Se rilassiamo le braccia e allontanando la barra l'angolo di incidenza diminuisce.

After taking power by pulling the bar, if we release the same, the kite loses power but is much faster.

At the zenith the kite has an angle of incidence with the wind close to zero: thus it has a small power and is the ideal location if we want to spop and relax.

Considering what has been said before and in the previous chapters, for controlling the kite and for getting the required power we have to combine the use of kite de-power system and the movement of kite in the wind window (moving it to the right and left).

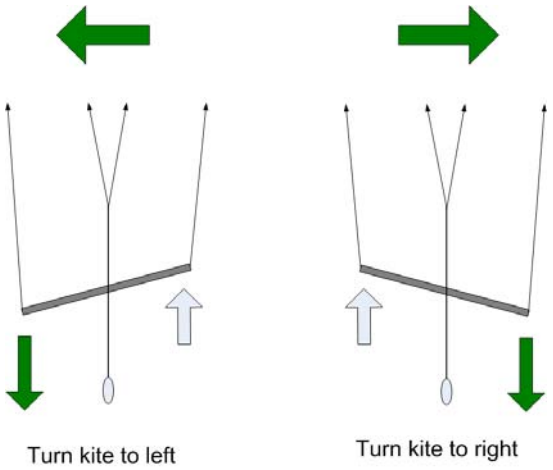
Let's get used to gradually pull the bar when the kite in moving down from the zenith (by moving it left and right) for getting the power and to stretch the arms (release the bar) when we want the kite go quickly to the zenith.

IMPORTANT: When we start with kitesurfing is natural to pull the bar if you feel precariously balanced or in a trouble. In doing so, however, the kite get power and for us, that we are new kiters, it becomes ungovernable! In case of any problem or if we don't know witch action should be done, it is better to remove our hands from the bar (release the bar)! In this way, the kite will lose power and it will simply fall down in the edge of the wind window; in this point, aslowly and easily, we can re-launch the kite and continue to practice!

11. Maneuvers to practice for learning to control the kite

11.1. Rotations of the kite

Once we have lauched the kite, we must control it.
If we suppose to pull the right side of the bar (we are pulling the back line right), the kite will start turning to the right: this rotation will end only when we stop with the pulling of the bar, stretching our arms. If instead to stretch the arms we should pull the bar from the left side (remember that we are supposing the movement of the kite to the right), we will stop the correspondent side of the kite (the left part), while the opposite side (the right side) will start to rotate (more pronounced will be the pulling of the bar, highter will be the rotation of the kite).



For making practice on control of the kite, we should make rotation of the kite similar to ∞ in the wind window: initially keeping the kite up and running close to the zenith, then with some wide ∞, until the edges of the wind window.
With these exercises we will get confidence with the the kite and its reaction times.

NOTE:

- Learn to control the kite with one hand: it is necessary to understand which hand we have to use in a certain position of the kite: when the kite is in the right part of the wind window, we will us the left hand to control it; when the kite is in the left part of the wind window, we will use the right hand to control it.

11.2. Water re-launch of a pump kite

With the modern 4-line kites, re-launch a kite that fall in the water is very easy.
In effect it is just necessary:

1. to hardly pull one of the two back-lines (using the bar or pulling directly the back-line)
2. the kite will move to the edge of the wind window where, after the kite will be in a vertical position, it will be easy to re-launch the kite always continuing to pull the back-line

3. Only when the kite start to fly we can release the back-line and control the kite with both the hand on the bar.

In the pictures it is shown the case of re-launching the kite pulling the left back-line (remember: a) that the left back-line is the line to the left with respect to the front part of the kite b) that, if we have correctly fitted the kite, the back-left line is the red one).

11.3. Walking with the kite flying

Keeping the kite in the wind window (at an height of about 45-60° with the ground) and controlling it with one hand, walk on a beam reach (traverso).
Let's learn to walk in all directions: it will be useful when we have to go in the water and after having the first sides when, after having leeway, we have to walk along the beach with the board in his hand.

11.4. Body dragging

Be able to do the body drag is mandatory. It should be regarded as an essential skill.
The body drag is usually used to get fast, without the board, an object / place / partner who is at our sides or downwind in respect to us.

1. **Downwind body dragging**

For having the body drag downwind (to move in the wind direction) we have to move the kite, after relaxing our body, around the zenith with the ∞ movements that we know well: let's our legs remain behind and we will start to move downwind (suggestion: let's follow the movements of the the kite to the left and to the right being relaxed).

2. **Upwind Body dragging**

Upwind body dragging is often essential for retrieving our board after a stack. We have to learn it sooner rather than later.

Many beginners are worried about losing their board while learning. Some people use a board leash to connect it to them but this is very dangerous (the leash is an elastinc and after a stack it can sent the board to our head) and should be avoided. We can retrieve our board when we lose it by body dragging back upwind.

The technique of upwind body dragging is exactly the same we have performed on the beach, walking with the kite flying, except we are using our body and one arm as the keel:

1. Bring the kite over our head (at the zenith) in the neutral position
2. Have a look around to find our board. If it is floating with the straps up it will be easy to see. Let's head in the direction of the board. Let's say our board is behind us to our left, looking downwind
3. Fly the kite around to the left to about 10 or 11 o'clock
4. Pull the bar in to get some power, using our right hand
5. Keep the kite flying in this position using our right hand
6. Stretch our left arm out in the water just below the surface in the direction we will travel, with your body also pointing to the left
7. Keep our left arm pulling against the water to act as keel when we are moving
8. Our kite will fly to the left of the wind window and start taking us upwind
9. If we have to change direction, let's swap our left hand over to controlling the bar

10. Stretch our right arm out to create a keel for going upwind on the right
11. Repeat the body drag to the left and to the right until we get the board
12. When we will reach the board, let's grb it, bring our kite to a neutral position (zenith), do a water start and start to kitesurfing.

11.5. Moving the kite to simulate the water start without board

In order to simulate (on the water or in the beach) a water start we have to execute the following steps:

1. Suppose a water start to the right
2. Positioning the kite at 12 o'clock (zenith)
3. Let's have a position similar the position we have when seated, with the legs bent and the bust backwards
4. Let's move the kite slightly backward (away from your intended direction of travel, e.g. to 11 o'clock)
5. Turn the kite in our direction of travel and dive it forward. The deeper we dive the kite the more power it generates
6. We will have to take advantage of the kite power in order it lift us slightly from the water: we have to well choose the area of the wind window where we will get the correct power to easily lift. Let's start with a short dive so that we are underpowered (we should get lifted out of the water then fall backward). As we know that the kite gives us more and more power when we are sending it into central areas of the wind window, we will send it progressively in the power zone, always starting from a position close to the zenith, until we get the necessary power. Avoid getting overpowered (which will pull us forward making us stack)
7. Once we have confidence with handling the diving kite, let's try a more powerful dive so that we get lifted right out of the water.

12. Water start

A water start (also called a board start) is the critical skill to learn when you have mastered controlling your kite and body dragging. This will be your first real taste of kitesurfing.

Supposing to start to the right, once in the water, we have:

1. Send the kite at 12 O'clock
2. Get a position similar the position we have when seated, with the legs bent and the bust backwards
3. Grab the board and angle it 45 degrees to downwind
4. Insert the feet on the boards straps (but just if we are in the correct position); keep the right tip of the board out of the water
5. Move the kite slightly backward (away from your intended direction of travel, e.g. to 11 o'clock)
6. Turn the kite in our direction of travel and dive it forward. The deeper we dive the kite the more power it generates
7. We will have to take advantage of the kite power in order it lift us slightly from the water: we have to well choose the area of the wind window where we will get the correct power to easily lift. Let's start with a short dive so that we are underpowered (we should get lifted out of the water then fall backward). As we know that the kite gives us more and more power when we are sending it into central areas of the wind window, we will send it progressively in the power zone, always starting from a position close to the zenith, until we get the necessary power. Avoid getting overpowered (which will pull us forward making us stack)
8. Once we have confidence with handling the diving kite, let's try a more powerful dive so that we get lifted right out of the water
9. Hang on to the bar as we get lifted out of the water and start planing downwind to gather board speed. If you are going too fast just push out (or relaase) the bar
10. Straighten the legs once out of the water
11. Look where we want to go. This will get our body oriented in the right direction and assist with edging the board

12. Edge the board with your heels and turn it in your direction of travel
13. Keep the kite flying; by now we should bring it up and down to generate more power, or have it locked in position if the wind is good and enough

Tips:

- Make sure you get enough board speed before edging the board
- In case of strong winds, we don't need to fly the kite down so hard and we don't need to fly it up and down (sine wave): we will be able to fly it "locked in" at a convenient position
- Avoid pointing the board too far upwind and/or choking the kite (bar in too much): both actions will make our kite losing power and we will go back into the water.

13. Glossary

- Air Time o Hang Time: time spent in the air during a jump
- Aspect Ratio: The ratio between the width and height of the kite. Kites with high AR (BOW KITES) are normally more technical, allow higher jumps and have a big wind range. Kites with low AR (C-KITES) are faster and allow a longer Air Time
- Bladders: once inflate, give the necessary support to maintain the structure and profile of the kite
- Body drag: operation for moving in the water without board; it is an essensial skill for kitesurfing
- Chicken loop: rubber ring for connecting the front-lines to the harness
- De-power: system that allows to get and release power, pulling or realising the bar
- Downwind: definition to indicate the position of 2 points in respect to the direction of wind; if we have two points A and B, we can say "the point B is downwind to the point A" if the point B get the wind later than the point B
- Kite: it is the sail that pull the kiter
- Kiter: person that do kitesurfing
- Knot: units for wind measurement; it is nautical mile (1,85 km) per hour (1 knot = 1,85 Km/h)
- Launch/re-alaunch a kite: operation of “take-off” and “re-take-off from the water” of a kite
- Leading Edge: part of the kite where it is located the biggest bladder. It is the first part of the kite that get the wind.
- Leash: lanyard (usually elastic) to be connected to one of the kite lines to ensure that, once activated the kite quick release, the kite could be connected to our harness but completely de-powered
- Offshore: generally is a wind blowing from the land to the sea
- Onshore: generally is a wind blowing from the sea to the land
- Power zone: is the area of the wind window where the incidence (angle) wind-kite will increase up to the maximum (the pull of the kite is increasing in parallel). In this area your kite is moving the fastest and catches the most wind (this creates

an extreme amount of power). Here is where you create the pull you need to kiteboarding and to tricks.

- (be) Downsized: have a kite smaller than the kite necessary for kitesurfing in safety with the intensity of present wind
- (be) Oversized: have a kite bigger than the kite necessary for kitesurfing in safety with the intensity of present wind
- Quick Release: system that allows the kiter to quickly release the kite in case of emergency
- Side-Shore: generally is a wind blowing parallel to the beach
- Stalling: lack of necessary pressur (wind) on the kite for making it flying
- Struts: are the “pockets” of the kite, placed across the leading edge, that contain the bladders
- Trailing edge: is the back part of the kite, where the wind is going “out” from the kite; at the end of trailing edge are connected the back-lines
- Upwind: definition to indicate the position of 2 points in respect to the direction of wind; if we have two points A and B, we can say "the point A is upwind to the point B" if the point A get the wind before the point B
- Ways of sailing:
    a. Close hauled (Bolina): the way of navigation in the direction where the wind blows (upwind); that make us autonomous and allows us to return back to the same point we started from the beach
    b. Beam reach (traverse): the way of navigation with an angle of 90 degree in respect to the wind
    c. Broad reach (lasco): the way of navigation in the same direction of the vind (downwind);
- Wind range: is the range that indicates the knots that are suitable for kite using the kite in safety. The wind range is influenced by the kiter's weight: 2 kiters with different weights need 2 different sizes of kite to kitesurfing with the same intensity of wind.
- Wind Window: the area where we fly our kites; we use parts of it to keep our kites when we don’t want any power, and we use other parts when we need to get power.

- Zenith: the point where the kite fly above our head (12 o'clock)