Biodiversity

The variety of life on Earth, its biological diversity is commonly referred to as biodiversity. The number of species of plants, animals, and microorganisms, the enormous diversity of genes in these species, the different ecosystems on the planet, such as deserts, rainforests and coral reefs are all part of a biologically diverse Earth.

Biodiversity contributes to our health, food and energy security, provision of raw materials and provides us with choice.

Roughly 1.4 million species are known to science, but estimated 10-30 million species are likely to exist. 18,788 species out of 52,017 so far assessed are threatened with extinction. This escalating extinction crisis shows that the diversity of nature cannot support the current pressure that humanity is placing on the planet.

Biodiversity under Threat

Human activity is threatening biodiversity - over-hunting, habitat destruction, invasion of non-native species, domino effects, pollution, and climate change. Habitat loss presents the single greatest threat to world biodiversity.

Industrial-farming techniques deprive diverse species of food sources and instead feed them with chemicals, destroying the rich biodiversity in the soil and with it the basis for the renewal of the soil fertility.

Conservation and sustainable development strategies take into account the importance of nature and its biological diversity to life on our planet. At least 40% of the world’s economy and 80% of the needs of the poor are derived from biological resources. The richer the diversity of life, the greater the opportunity for medical discoveries, economic development, and adaptive responses to new challenges such as climate change. Declining biodiversity is therefore a concern for many reasons.
Ecosystems

Biodiversity makes our ecosystems productive - Different species, no matter how small, all have an important role to play. A larger number of plant species means we have access to a greater variety of crops. A diversity of species ensures natural sustainability for all life forms and healthy ecosystems can better withstand and recover from a variety of disasters.

Healthy biodiversity provides a number of natural services for everyone, such as:
- Protection of water resources;
- Soil formation and protection;
- Nutrient storage and recycling;
- Pollution breakdown and absorption;
- Contribution to climate stability;
- Maintenance of ecosystems;
- Recovery from unpredictable events.

Biological resources provide humans with a variety of things we need, including:
- Food;
- Medicinal resources and pharmaceutical drugs;
- Wood products;
- Ornamental plants;
- Breeding stocks, population reservoirs;
- Diversity in genes, species and ecosystems.

Biodiversity also brings us a number of social benefits, such as:
- Education;
- Recreation and tourism;
- Cultural values.
In different habitats, the ecosystems see all life forms closely integrated and supporting each other. Consider for example the biodiversity at work when you look a field full of grazing cattle:

- The cattle feeding on the grass in the field;
- Cattle waste is feeding the soil that nourishes the grass;
- Bacteria feed on the cellulose fibres of grass and return them to the soil;
- Amoebas feed on bacteria making lignite fibers available for uptake by plants;
- Algae provide organic matter and serve as natural nitrogen fixers;
- Rodents that bore under the fields aerate the soil and improve its water-holding capacity;
- Spiders, centipedes and insects grind organic matter from the surface soil and leave behind enriched droppings;
- Earthworms contribute to soil fertility, aerating the soil, drainage and maintaining soil structure.

This example shows that all life forms in an ecosystem are important.

**Threats to Biodiversity**

Fruits and vegetables, which represent a third of our food, would not exist without pollinators visiting flowers. The primary species that fertilizes food-producing plants is the honeybee. Honey bees have suffered dramatic declines in recent years.

Honeybees are vital to biodiversity. There are some 130,000 plants that rely on honeybees pollinating them. Researchers think the decline in the honeybee is related to disease, environmental pollution, environmental degradation and farming practice such as the use of pesticides and the growing of large fields of the same crop. The results of human activity would appear to be killing off the honeybee.

The dependency of plants on pollinators (honeybees) and of pollinators on plants is crucial. If we want to safeguard the supply of our food supply we need honeybees to pollinate.
Another example of how human actions can negatively impact on the inter-dependency of species comes from our oceans.

Fishermen encouraged whaling as they thought whales ate large quantities of the fish they wanted to harvest. A reduction in local whale populations meant that killer whales that would normally prey on younger whales moved on to hunt seals instead. As the seal numbers declined the whales moved on to hunt sea otters. This decimated otter populations but caused urchins and other targets of the otters to flourish. These in turn decimated the kelp forests that had previously enabled fish larvae to flourish. The fish larvae now exposed became easy prey for a variety of sea life and so fish stocks rapidly declined.

In advocating reduction of the whale population, the fishermen disrupted the biodiversity of the ocean’s ecosystem creating a domino effect that caused a decline in fishing stocks and impacted on the livelihoods of the same fishermen.

Invasive Alien Species

Invasive alien species (plants, animals and micro-organisms) are species that occur outside of their natural habitat or country of origin and due to their ability to outperform and outgrow indigenous species; they establish themselves in these non-native habitats.

Invasive alien species have also been called weeds, pests, encroachers, aliens, invasives, exotics or non-indigenous. They are native to a particular area or region, but have been introduced elsewhere, either by accident or on purpose. Invasive alien species can be animals (e.g. rats), plants (e.g. lantana) and micro-organisms (e.g. cholera).

The introduction of alien species often upsets local biodiversity leading to the decline or extinction of the natural habitat.

They may push out indigenous species or may cause damage in other ways. Willow Trees for example planted to help dry up water logged areas can destroy wetlands habitats impacting on the animals and plants that have adapted to wetland environments.

The African Great Lakes, Victoria, Malawi and Tanganyika, are famous for their great diversity of endemic species, termed "species flocks", of cichlid fishes. In Lake Victoria, a single, exotic species, the Nile Perch was introduced for subsistence and sports fishing. This fish has become established and has caused the extinction of most of the native species, by simply eating them all!
Climate Change

Throughout the Earth’s history the climate has been subject to change. Some species have been able to adapt whilst others, like their habitats, have disappeared. The challenge with the current climate change that our planet is experiencing is the rate of change. Our climate is changing so quickly that it is threatening the extinction of many species as there simply isn’t time for them to adapt.

Rapid climate change and its impact on nature’s biodiversity poses a major threat to mankind. Climate change is impacting on food supply, availability of water, sources of medicine and other natural resources that we take for granted. As plants and fauna disappear, these become unavailable to humans as a resource.

Climate change is altering migratory species patterns, causing species to move to higher latitudes and increasing coral bleaching.

Consider this scenario of how climate change could be impacting on biodiversity:

- The ice caps are melting due to global warming.
- The ice caps used to help reflect sunlight and heat back out to space.
- The oceans and the air now absorb more heat which in turn accelerates the melting of the ice caps.
- Species on top and under the ice caps start to disappear as their habitat is changed.

- Increased seawater temperature and salinity, leads to changes in algae (primary) productivity and impact on plankton and fish.

- Declining stocks of fish impact on birds, fish and marine mammals further up the food chain.

Climate change is leading to changes to local ecosystems and in turn to species loss. Decreasing biodiversity represents a serious problem for humankind which is reliant on biodiversity to meet many of their needs.
When working with our football teams / squads:

- Make them aware that they appreciate the importance of bio-diversity to our life on this planet.
- Ask players and supporters to avoid damaging natural habitats.
- Organise players to help environmental groups remove alien plants from the environment.

As YDF coaches we can raise awareness of bio-diversity among the families, peers, youth and communities. We can become champions of bio-diversity:

- Encourage your school system and local government to help develop and promote bio-diversity and conservation among children and adults.
- Raise awareness about how to promote biodiversity.
Using Football Exercises regarding the Topic

The Life Skills listed below will be focused on in this lesson. They are incorporated in the Football Exercises on the following pages.

Types of Equipment useful for these Exercises

- Pitch
- Footballs
- Cones
- Differently coloured / marked Cones
- Goals
- Markers
- Whistle
- Watch / Stopwatch
EXERCISE 1

"4-on-4 Game"
- The coach asks the teams to choose: who will be the goalkeeper, who will be the player who may shoot goals, and who will be the field players who may not shoot goals.

Include in training session: WARM UP  MAIN PART  CONCLUSION  COOLING DOWN

There are many different species in nature that all have their different functions and characteristics.

EXERCISE 2

"Diversity Game"
- The players on the outside of the field try to get to the other side of the field without being touched.
- In the first round, the field players may only stretch their arms.
- In the second round two of the six players may move in a crab’s walk.
- In the third round two further players may move on all fours, and in the fourth round one player may walk normally.

Include in training session: WARM UP  MAIN PART  CONCLUSION  COOLING DOWN

Initially there is no biodiversity, there are only trees. Then there are crabs, then animals, and eventually also one man. The children learn that all these species are diverse and influence them differently.

- Suggestion: with a big team players can start from both sides.
EXERCISE 3

“Save your Energy”
- The children move around the field with balls.
- The coach gives them various dribbling exercises.
- After a while, the coach gives a command that means the players have to go to one of the small squares, where they either have to lie down or may drink something.

Motivating Story
The energy of the children is depleted after a while and has to be recharged. To protect the environment, the regenerative energies of the sun and water are utilised.

Include in training session: WARM UP MAIN PART CONCLUSION COOLING DOWN

EXERCISE 4

“Sialom Game”
- Two teams compete against each other.
- Team 1 may shoot at the goal. In the beginning, they may shoot from the first cones.
- Once all the players from Team 2 have run through the slalom course, Team 1 may only shoot from the second cones.
- When all the players of Team 2 have run through the slalom course twice, Team 1 may only shoot from the third cones.

Motivating Story
As the Earth warms up, it has a negative effect on mankind.

Include in training session: WARM UP MAIN PART CONCLUSION COOLING DOWN
EXERCISE 5

“Stronger together”
- The coach divides the players into two teams.
- The players must pass the ball five times in order to be allowed to shoot at the goal.
- Once a goal is scored, the other team loses one team member.

The environment consists of a variety of ecosystems and organisms, all these elements must play together in order to function well.

Include in training session: WARM UP, MAIN PART, CONCLUSION, COOLING DOWN
The natural environment is being stressed by human activity and we all have the challenge of addressing threats to the environment, individually, collectively, in our communities, nationally and internationally.

These challenges include:

- How to reduce our reliance on natural resources that are not renewable.
- How to stop deforestation and to plant more trees to replace those we have destroyed.
- How to preserve our land by reducing pollution and using better farming practices.
- How to stop over fishing the oceans.
- How to slow down global warming and address the impact of climate change.

Carbon Footprint

A person’s carbon footprint is an estimate of how much carbon dioxide is produced to support their lifestyle. It measures a person’s impact on the climate based on how much carbon dioxide they produce. Factors that contribute each person’s carbon footprint include their travel methods, general home energy usage, what they eat, whether they recycle and how they manage their waste. A person’s carbon footprint is measured in terms of the tonnes of carbon dioxide they produce.

I have a very low carbon footprint. I do not use motorised transport, have any energy burning appliances in my burrow, or eat red meat. I also always recycle my waste. It makes great compost for the plants around me.

Do you know if your carbon footprint is high or low like mine?

You can find calculators online that help you calculate the amount of carbon dioxide your lifestyle is producing. If everyone in the world knew their carbon footprint and how their individual lifestyle was contributing to the amount of carbon dioxide they produce, they could take steps to reduce their carbon footprint or to offset it.

Carbon footprints can also be applied on a larger scale, to companies, businesses, even countries.
Practical Environmental and Climate Change Actions

Taking Action

Individuals can take action to address the challenges to the environment including addressing climate change through the following strategies:

- Educate
- Campaign
- Mitigate
- Offset

Education

YDF Coaches can help address challenges to the environment by using football to educate youth on the importance of protecting our environments and on conserving resources. We can do this through football based activities of which there are many examples in this manual. We can use other means of raising awareness of the youth we work with. Examples would include:

- Organising an Earth Day tournament with teams scoring points for football and for a quiz on the environment;
- Obtaining leaflets on environmental matters from environmental groups and distributing these to the youth (or if they have access to the internet send them to websites on environmental education and save some paper);
- Organising a community clean up (contact the local authority or environmental groups to get safe gloves for the youth to wear when collecting litter);
- Introduce a "points scheme, youth bring paper, plastics, soft drink tins, that can be recycled to training sessions and get points which are linked to a reward system."
Mitigation

The term mitigation is used to describe measures that can be taken to decrease or reduce the impact of actions that are harming the environment. Adopting renewable less-polluting ways of producing energy such as solar or tidal power will reduce the need to use non-renewable polluting means that burn fossil fuels. Through using alternative forms of energy we can reduce the amount of air pollution and decrease or reduce global warming.

There are many things that you can do as an individual, and can encourage others to do to mitigate. Here are a few examples:

- Turn off electrical equipment when not in use (lights, television, DVD player, Hi Fi, computer, etc);
- Fill your dish washer and washing machine with a full load - this will save you water, electricity, and washing powder (wash the football club's team kit together);
- Fill the kettle with only as much water as you need;
- Do your weekly shopping in a single trip;
- Hang out the washing to dry rather than tumble drying it;
- Fit energy saving light bulbs;
- Insulate your hot water tank;
- Recycle your grey water;
- Replace your old fridge / freezer (if it is over 15 years old), with a new one with energy efficiency rating of "A";
- Car share to work, or for the kids school run, or taking the youth to football training or matches;
- Use the bus or a train rather than your car (consider public transport for team trips);
- For short journeys either walk or cycle;
- Try to reduce the number of flights you take (choose opposition closer to home, create more local leagues);
- See if your employer will allow you to work from home one day a week;
- When staying in a hotel - turn the lights and air-conditioning off when you leave your hotel room, and ask for your room towels to be washed every other day, rather than every day;
- Don't buy bottled water if your tap water is safe to drink (take a plastic bottle to training with you and carefully fill it from the tap);
- Buy local fruit and vegetables, or even try growing your own (start a community garden beside the football pitch);
- Don't buy fresh fruit and vegetables which are out of season, they may have been flown in;
Practical Environmental and Climate Change Actions

- Try to only buy products made close to home (look out and avoid items that are made in the distant lands);
- Don't buy over packaged products;
- Recycle as much as possible (organise recycling and reusing at the football club);
- Read the labels of products you buy so that you buy more environmentally friendly products. Look for the recycle logo as well as the ozone friendly logo.

There are many other things that you can do as an individual and can encourage your friends, family and the people you work with to do.

- **Re-Purposing**

  YDF Coaches can mitigate by creating their own training equipment from waste products and repurposing them for use on the sports field.

  △ Create a set of mini-goals from recycled wood or plastic conduit. Use the wood or plastic for the frame and some old netting to complete the goals.

  △ Ask the players to bring their own plastic bottle to training. This can be a used soft drinks or energy drink bottle. The players can carefully fill their own bottles with water and have the use of their own water bottle.

  △ Use old soft drink bottles as cones for activities. Fill the bottom with some sand to provide stability.

- **Offsetting**

  The term offsetting is used to describe measures that can be taken to compensate for or counterbalance impact of actions that are harming the environment. A person calculating that their lifestyle produces a carbon footprint of 20 tonnes of Carbon Dioxide, which is 18 tonnes more than the global target per person to combat climate change, may decide to offset this by paying for trees to be planted. Trees absorb Carbon Dioxide and produce Oxygen.

  You can contribute to offsetting as an individual, and can encourage others to offset as well. Here are a few examples:

  △ You can plant some trees in your garden or community. Maybe some trees that will also act as a windbreak around your football pitch. Contact environmental groups to enquire how you can obtain some free trees to plant.
LESSON 6

Practical Environmental and Climate Change Actions

- You can install a solar heating panel to heat your water. Maybe the local football club can have floodlights driven by batteries that are powered by solar panels.

- You can start your own vegetable garden. Growing your own vegetables cuts down on the need to transport vegetables to shops and it also saves you money.

Mitigation and Offsetting are the two main strategies being used to address global warming and climate change.

Campaign

We would like to see YDF coaches become advocates for change and taking part in campaigns to increase awareness of our environment and what needs to be done if we are going to reverse the harmful effects of pollution and climate change. YDF coaches can help in the campaign for the environment by:

- Joining or partnering with local environmental organisations.

- Supporting environmental campaigns through football based activity.

- Sharing your knowledge on the environment with youth, friends, family and your community.

- Attending community meetings and getting the environment on the agenda.

- Practicing what you preach, recycle, reuse, reduce.

Don’t throw away anything that can be recycled!

Here is a list of things you should always recycle or reuse!

- Acid Batteries
- Flammable
- Paper
- Metal
- Newspaper
- Oil
- Paint
- Paper
- Plastic Bottles
- Steel Cans
- Tires
- White Goods (Appliances)
- Wood
- Writing / Copy Paper
- Yard Waste
LESSON 6

Practical Environmental and Climate Change Actions
Football Session 1

WARM UP

20 MINUTES

MAIN PART

50 MINUTES

CONCLUSION

20 MINUTES
WARM UP

20 MINUTES

PHASE 1

“Catch Games”
- All the players are in a square with one catcher.
- This catcher has to tag the other players.
- The tagged players are now also catchers.
- The tagged players hold hands, thereby forming a chain, and carry on trying to tag other players.

Variations
- Tagged players are not eliminated, but have to make a bridge, and are back in the game when another player crawls through the bridge.

Motivating Story
The catcher is an air polluter. He gets more and more players on his side so that in the end no one has the chance to get away from the polluted air.

PHASE 2

Variation of “Catch Games”
- There are two catchers, wearing different coloured bibs.
- These two catchers try to tag as many players as possible.
- Tagged players are eliminated and can do another exercise outside the square until all the players are eliminated.
- Players may not be tagged if they are standing at a cone.

Variations
- Tagged players are not eliminated, but have to make a bridge, and are back in the game when another player crawls through the bridge.

Motivating Story
The two catchers are different sources of pollution. One, for example, is a car driver with a broken exhaust, the other one burns refuse. More and more people are caught in the polluted air, except for those people standing at a tree, because trees are very important...
**MAIN PART**

**50 MINUTES**

**PHASE 1**

"Wasting of Water"
- Two players stand opposite each other with a ball.
- They have to pass the ball to each other through the cone goal. If they do not manage to shoot through the cone goal, a smaller ball, e.g., tennis ball, is available as an alternative. If this one also does not go through the cone goal, this pair is eliminated.
- Several pairs can compete in this exercise.

*Motivating Story*

The ball symbolises the water. The players have to treat it carefully. If the clean water is used up, they still have the possibility of using polluted water. But that water is also quickly used up if it is wasted.

One has to treat water carefully!

**PHASE 2**

"Water Shortage and Pollution"
- Shoot at goal with various balls, e.g., normal footballs, tennis balls, rugby balls, balloons, ...
- There are more players than balls ⇒ the balls need to be collected after the shot at goal.

*Motivating Story*

The balls symbolise the water that is used during a shot at goal. The first player can still shoot at the goal with a normal football, but after the shot the clean water is used up (water shortage). As the players now have to fall back onto polluted water, shooting a goal is now far more difficult. Fresh water (new balls) must constantly be fetched. Water is a limited resource and should not be wasted."
CONCLUSION

20 MINUTES

GAME

“4-on-4 Game”
- The coach asks the teams to choose: who will be the goalkeeper, who will be the player who may shoot goals, and who will be the field players who may not shoot goals.

Motivating Story

There are many different species in nature that all have their different functions and characteristics.
LESSON 6

Practical Environmental and Climate Change Actions
Football Session 2

WARM UP

20 MINUTES

10 Balls
10 Cones
10 Bibs

MAIN PART

50 MINUTES

1 Ball for every player
5 Cones
1 Goal

CONCLUSION

20 MINUTES

1 Ball for every player
16 Cones
Bibs in 3 different colours
WARM UP

20 MINUTES

PHASE 1 (if required)

“Cleaning the Playing Field”
- All the players run over the playing field to collect refuse.
- While they are doing that, the coach can instruct them to do various running exercises or exercises with a ball.

PHASE 1 (alternative)

“Separate your Waste”
- Various items are spread in a square (bibs, balls, cones).
- The task is to collect these items as quickly as possible and bring them to the side-line, sorted!
- The bibs have to be carried by two players, the balls have to be dribbled and the cones have to be balanced on the head.
- Two teams have to fulfill this task one after the other. Which team is quicker?

Variations
- With bell.

Motivating Story

There is a lot of refuse lying around. If one is a big group, this refuse can be cleared quickly. It is also important that one does not simply burn the refuse. It has to be sorted and then disposed of lawfully and environmentally friendly.
PHASE 2 A (choose one)

"Personal Water and Drinking Requirement"
- The players run around the outside of the square. At every corner they have to perform a task for which they need to collect a ball.

- **1st cone (Morning)**: collect a ball from the centre of the square, dribble around the cone and return the ball to the centre. Return to the cone and carry on to the next corner.

- **2nd cone (Lunchtime)**: two players collect a ball from the centre and perform five passes within the square.

- **3rd cone (Afternoon)**: to begin with the players, without a ball, run to the first cone and back again, then to the second cone and back again, and then to the third cone and back again. When all the players have completed this part of the exercise, they have to repeat it, this time with a ball.

- **4th cone (Evening)**: the players have to juggle the ball.

- After this exercise has been completed, the children can be asked to run around the square for as many times as they feel they can survive without water (→ 8 rounds).

---

Motivating Story

The four cones represent a time of day with which a certain activity is linked.

It is important that one drinks enough water during the day. Drinking water is symbolised by collecting a ball.

In the morning, after getting up, one should drink some water. At lunchtime water is used to cook a meal. As one does not cook for oneself only, two players have to perform this exercise together. Then during the afternoon the children do sports. Here the pressure is particularly high; therefore the children have to drink more water afterwards. During the evening the children again have to drink water with their supper.
PHASE 2 B (choose one)

“Personal Water and Drinking Requirement”
- Again the players run around the outside of the square.
- This time though the players are not required to do exercises at the corners, only when a passer stands on the outside.
- Those pass / throw a ball to the players, who then have to return the ball by various methods, e.g. normal low pass, volley, trapping the ball with the upper thigh, trapping the ball with the chest, header ...

Motivating Story

The four cones still represent the different times of the day and the balls represent the water. This time though the water is not used for drinking / cooking, but for hygiene. After standing up in the morning one needs water to freshen up. Before lunch one should wash one’s hands. During the afternoon, after sport, one should shower. And in the evening one should definitely wash one’s hands before supper.

PHASE 2 C (A + B) (choose one)
MAIN PART
50 MINUTES

PHASE 1

“Be careful”
- All the players dribble in the playing field.
- The coach gives them different exercises, e.g. only with left, right...
- The coach then calls one player and a number. The player has to dribble across that line as soon as possible.
- All the other players turn into trees (arms out wide branches) which the player may not touch.

- If the player manages to leave the playing field without touching the other players, he/she must run to the cone from where he may shoot a goal.
- The other players carry on dribbling in the playing field.

PHASE 2 A

“Goal Shooting Exercise”
- The players play in pairs.
- One player dribbles towards the goal with the ball, but leaves it at the cone. He/she runs on to the goal without the ball.
- The other player comes up shortly after him/her and shoots the ball at the goal.

The first player is an environmental polluter.
The second player cleans up the refuse after him.
He then flings the refuse at him so that the first player realises that next time he should take his refuse along and dispose of it properly.
**“Goal Shooting Exercise”**
- The players shoot at the goal, one after the other.
- If a player does not manage to score a goal, the whole team has to run around the goal once.

**Motivating Story**

The children have to dispose of the refuse, but if it does not land in the “bin”, they will be punished.
CONCLUSION

20 MINUTES

“Handicap Game”
- There are three teams.
- Two teams play against each other on the playing field.
- The third team dribbles around the field.
- The third team decides how the players on the field have to play, i.e. if the team dribbles or stretches (tosses), then the field players can play without any handicaps.
- If the team should take a ball in the hand (stretched to the front as a steering wheel), the field players may play with two ball contacts only.
- If the team passes the ball through the cone goals, the field players have to play directly.
- The tasks are swapped after five minutes.

Motivating Story

The third team represents the degree of air pollution. If there are a lot of cars driving next to the playing field or someone is burning refuse, the pollution of the air increases and it is more difficult for the field players to score a goal.
Conclusion

Life on our planet as we know it is under threat as a direct consequence of human activity. Pollution of our atmosphere is causing global warming which in turn is causing our climate to change bringing with it increased natural disasters and changes to the environment. The health of far too many is being damaged by pollution of our air, water and soil. Water suitable for drinking is becoming scarce. Land is being eroded. Habitats are being polluted and damaged leading to loss of animal and plant life and major impacts on biodiversity.

If we are to reverse the damage we have been causing since the onset of industrialisation, everyone needs to take responsibility and to start mitigating and offsetting the damage we are causing to the environment.

Everyone has a role to play from national governments to major corporations to individual citizens. We all need to take responsibility for our environment. Our failure to do this will have dire consequences for future generations.

Pollution and climate change is already impacting on the lives of the poor and is contributing to increased poverty. People living in poverty are the least well placed to adapt to changes to the environment and the consequences of climate change. This is why ensuring environmental sustainability is one of the millennium development goals.

YDF coaches can contribute to environmental sustainability by incorporating messages around the environment into their football programmes. If we can raise the awareness of the youth around the importance of the environment through, we will produce a generation of champions. Champions, not just in football, but also for the environment.

Reflection

Having had the time to read this manual and participate in an environmental awareness workshop, we would encourage you to take the time to reflect on what you can do to make a positive difference to the environment.

- Reflect on how you can use the knowledge you have gained to become an advocate of environmental protection in your community?
  - How can you lead by example?
  - What are you going to do differently that will help mitigate or offset climate change?
- Reflect on how you will integrate environmental protection into your football programme?
  - What things will you do to educate youth on the environment?
- Reflect on how you can work in your community to promote environmental matters?
  - What other organisations exist in your community that are working on environmental issues?
  - Is the environment on the agenda of your local community councils? What can you do as a football coach or football club to support the community’s efforts to encourage environmental awareness and good practice?
Conclusion, Reflection & Action Planning

Action Planning

Having taken the opportunity to reflect on what you can do individually, with the football team, and with your community, to address challenges to the environment and climate change, it is now time for you to plan to take action.

Set some short term and long term goals and write these down. What are the things that you can start to do immediately? These can be your short term goals. What could you achieve in the long term given some time to plan actions? These can be your long term goals.

When setting goals you can use the **GROW** model.

- **G for Grow** - What is it you want to achieve.
- **R for Realistic** - Make sure that your goal can realistically be achieved. If not, you need to revise your goal.
- **O for Options** - Consider how you are going to achieve your goal. What steps will you need to take? Will you have different options? What options will be the best for you to action?
- **W for Will** - Consider whether you, your players or your community have the will to see this through and achieve your goal. If you do not believe the will exists, then you need to revise your goal and set a new goal that would be easier to achieve. It is better to make a small contribution than not to succeed and make no contribution at all.

When you are action planning, why not set some goals for yourself, some goals for the club/team, and some community based goals. Share your personal goals with your friends and family, they will help you achieve them. Involve the youth in your team/club in setting goals for them to achieve. Consult other environmental champions in your community and see how you can collaborate to achieve goals for community activation.

**Action Planner**

YDF Coaches can use a simple action planner such as the one shown here to set short and long term goals:

<table>
<thead>
<tr>
<th>Goal</th>
<th>Realistic</th>
<th>Options</th>
<th>Will</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Term</td>
<td>Yes</td>
<td>Each player to bring a water bottle to training and to fill from the tap taking care not to spill water unnecessarily.</td>
<td>Our players will develop the will to achieve this goal through our football sessions which will educate them that water scarcity is not far from us.</td>
</tr>
<tr>
<td>All players will reduce the amount of water wasted at coaching sessions</td>
<td></td>
<td>A sign will be placed next to tap stating that our country needs to save water and that the tap should never be left running.</td>
<td></td>
</tr>
<tr>
<td>Long Term</td>
<td>Yes</td>
<td>The club will find a donor to gift cultivate these around the football field.</td>
<td>We will discuss at our club executive the importance of addressing climate change and reducing our carbon footprint. We will create an environmental policy and action plan.</td>
</tr>
<tr>
<td>Our club will reduce our carbon footprint</td>
<td></td>
<td>The club will ensure that players share transport to matches and will only use transport that is well maintained</td>
<td></td>
</tr>
</tbody>
</table>
Taking Action to Help Prevent Climate Change & Keep our Air Clean

How should we mitigate and adapt to address climate change and to keep our air clean. Using this worksheet you can identify ways how individuals, teams and communities can:

- a) help prevent climate change
- and
- b) keep our air clean.

Examples

**Action by Individuals**

- Use a bicycle.
- Opt for solar powered water heating.
- Avoid burning fuel in places without proper ventilation.
- Ensure our motor vehicle is properly maintained.

**Action by Football Teams**

- Eat less meat and more vegetables.
- Plant trees around the football field.
- Share transport to matches.
- Use solar powered floodlights.

**Action by the Community**

- Campaign for cleaner and integrated transport systems.
- Introduce recycling programmes.
- Conduct education campaigns around the dangers of polluted air to health.
- Campaign for renewable energy sources.

Please turn over this page and list some actions that you, your football team, and your community can take to keep air clean...
Lesson 2 - Air

What can I do?
To help address climate change?
To keep our air clean?

What can my Football Team do?
To help address climate change?
To keep our air clean?

What can my Community do?
To help address climate change?
To keep our air clean?
Taking Action to Save Water and to Keep Water Clean

How should we mitigate and adapt to save water and to keep water clean. Using this worksheet you can identify ways how individuals, teams and communities can:
- a) avoid wasting and save water and
- b) can help prevent water pollution.

Examples

**Action by Individuals**

- When brushing your teeth or shaving do not do so under a running tap.
- Take a shower rather than a bath.
- Do not pour chemicals down the drains, take them to a waste disposal drop off point instead.
- Do not litter, take your plastics home with you and recycle.

**Action by Football Teams**

- Irrigating the football field when the sun is down, early morning or in the evening.
- Wash the team kit together, rather than have eleven small individual washes.
- Have the team and fans clean litter from around the football field before and after each game.
- Provide proper ablutions for use by players and fans.

**Action by the Community**

- Report water leaks to the authorities and ask them to repair quickly.
- Ask people to collect rainwater for use in irrigating plants.
- Campaign for mines and factories to not contaminate local water supplies.
- Get recycling campaigns going in the community.

Please turn over this page and list some actions that you, your football team, and your community can take to save water and to keep water clean...
Lesson 3
Water

What can I do?

To save water?

To keep water clean?

What can my Football Team do?

To save water?

To keep water clean?

What can my Community do?

To save water?

To keep water clean?
Taking Action to Protect the Physical Environment and Avoid Pollution

How should we mitigate and adapt to threats to our soil. Using this worksheet you can identify ways how individuals, teams and communities can:

a) help protect their local environment
and
b) avoid pollution.

Examples

Action by Individuals

- Plant trees and plants.
- Use natural fertilisers and avoid using too many chemicals.
- Recycle waste.
- Always take your waste home.

Action by Football Teams

- Plant trees or bushes around the football field.
- Provide bins for waste and ensure these are emptied.
- Organise pre-training clean ups.

Action by the Community

- Turn areas of waste ground into green areas with grass, shrubs and trees.
- Support developments that do not require the use of greenfield sites and that make good use of land.
- Conduct anti-litter and anti-dumping campaigns.
- Encourage recycling schemes.

Please turn over this page and list some actions that you, your football team, and your community can take to protect the physical environment and avoid pollution...
### What can I do?

To protect my physical environment?

To reduce pollution?

---

### What can my Football Team do?

To protect my physical environment?

To reduce pollution?

---

### What can my Community do?

To protect my physical environment?

To reduce pollution?
Promoting Biodiversity

What can we do to protect our local environment and promote biological diversity?

Camels Under Threat

Wild camels in the Arabian Desert are eating plastic that is blown in from the urban settlements. They cannot digest the plastic and it reduces their appetite leading to them literally starving to death.

One in every two wild camels is under threat!

What can people do to reduce this threat to the biodiversity of the Arabian Desert?

Threats to your local Biodiversity

Consider the biodiversity of the local environment you live in or near. What are the threats to it? Consider urbanisation, alien species, pollution, over farming or fishing, land or soil erosion, etc.

List the threats here:

List what steps could be taken to address these challenges:
List ten things that you as an individual can do to help protect our environment and address climate change.
Team Action Plan

Devise a ten point team action plan that your football team can follow that will help them protect our environment and address climate change.

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Design a poster that urges your community members to respect the environment and contribute to action against climate change.
Structure of a Training Session

- Conclusion
- Main Part
- Warm Up
- Exercises
- Contents
- Phase
- Time

Each section can be filled with specific details or activities for the training session.
Date:    DD/MM/YYYY    Venue:
Organiser:    Number of Players:

Objectives / Focal Points:

1. WARM UP

Training Method 1

Procedure / Organisation:

Variation:

Training Method 2

Procedure / Organisation:

Variation:
## 2. MAIN PART

<table>
<thead>
<tr>
<th>Training Method 1</th>
<th>Time:</th>
</tr>
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<tbody>
<tr>
<td>Procedure / Organisation:</td>
<td></td>
</tr>
<tr>
<td>Variation:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Training Method 2</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure / Organisation:</td>
<td></td>
</tr>
<tr>
<td>Variation:</td>
<td></td>
</tr>
</tbody>
</table>

## 3. CONCLUSION

<table>
<thead>
<tr>
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<th>Time:</th>
</tr>
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<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>
Pitch - Half x 2
With lines and goals
Pitch - Full x 4
Without lines, with goals

Full Pitch x 4 - No lines, with goals
Pitch - Full x 4
Without lines and goals