

# Darwin Initiative for the Survival of Species

## Half Year Report (due 31 October each year)

<b>Project Ref. No.</b>	14-052
<b>Project Title</b>	Biodiversity Education and Action around the Caspian
<b>Country(ies)</b>	Iran, Kazakhstan, Russia, Azerbaijan, Turkmenistan
<b>UK Organisation</b>	Field Studies Council
<b>Collaborator(s)</b>	Caspian Environment Programme
<b>Report date</b>	October 2006 – after a visit in December
<b>Report No. (HYR 1/2/3/4)</b>	Half Year Report – Year 2
<b>Project website</b>	

### **1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).**

After a slow start the project has had a very active six months as the major outputs from the first phase are nearing their completion.

#### Second Team Meeting, Baku 15<sup>th</sup>-19<sup>th</sup> July

The Action report from the meeting is attached as Appendix 1. Two representatives from each country team together with a representative of the Caspian Environment programme, and the poster designer attended the meeting. The main agenda items were:

- the finalisation of the content and design of the posters;
- the agreement on structure and content of the teachers handbook and who was going to write what;
- the agreement on the numbers of posters to be produced and the distribution process;
- the agreement on the final structure of the website and
- the agreement on the theme and content for the identification key.

The meeting was very successful with most of the agenda items being fully covered.

#### Team writing materials

The team spent time writing the materials for the Teachers Handbook to accompany the posters. These materials were submitted on time and are in the process of being edited ready for translation and adaptation into the languages of the partner countries. The structure of the materials and some samples from the 75% of materials completed in their first draft form are attached as Appendix 2.

#### Development of the Identification key

Aleksey Kniznikov (Russia) and Hamid Amirbrihimi (Iran) have been responsible for the finalisation of the birds to be included on the Key to Caspian Wetland Birds. Illustrations are in the process of being drawn and the text for the key will be written before the end of the year.

#### Creation of the website

The website is currently being designed in Russia and should be on line early in the New Year. The structure of the site will allow each of the partners to post news on the site and for the young people collecting data to enter this data into the website and then to interrogate the site for results.

Finalisation of the posters

James Hindson visited Iran from the 2<sup>nd</sup> to the 8<sup>th</sup> December and took the opportunity to meet with the design and publishing company in Tehran. This was a useful two days spent finalising the content of the posters and the process that will be used to distribute the posters to the partner countries. The near ready versions of the posters are attached as Appendix 3.

A second meeting was held with the new Public Participation Officer for the Caspian Environment programme – the lead partner in the Darwin project. This was a useful meeting that confirmed content and copyright issues associated with the posters and the distribution process for getting the posters to each country.

A third short meeting was held with representatives of another Darwin project working in the region focusing on the Caspian Seal. Useful agreements were made for the Seal project to supply data to our Biodiversity Education project and for us to include more information about the Caspian Seal in our teacher's materials.

Plans for the next six months include the translation and then printing of the posters and teachers' handbook and their distribution to the countries in the region. We expect that the teachers workshops will take place between March and May 2007.

**2. Give details of any notable problems or unexpected developments that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.**

There have been no significant problems over the last six months, except for a slower than expected process in putting together the images and the data for the posters.

**Have any of these issues been discussed with the Darwin Secretariat and if so, have changes been made to the original agreement?**

No

**Discussed with the DI Secretariat:**                    **no/yes, in..... (month/yr)**

**Changes to the project schedule/work plan:**    **no/yes, in.....(month/yr)**

**3. Are there any other issues you wish to raise relating to the project or to Darwin's management, monitoring, or financial procedures?**

No

## **Appendix 1**

### **Action Report from July meeting**

#### **Second Team Meeting**

#### **Darwin Biodiversity Caspian Project**

**Baku – 15<sup>th</sup>-19<sup>th</sup> July 2006**

#### **Agreement and Action List.**

##### **A. Timescale for the project six months**

**Please stick to these deadlines**

<b>Action</b>	<b>By Who</b>	<b>By When</b>
Send images as promised to Kamran and copy to James	ALL	End July
Send poster text for teams for translation	James	5 <sup>th</sup> August
Return poster text translated to Kamran and copy to James (there wont be much!!)	ALL	10 <sup>th</sup> August
Send Teachers handbook text to Nadya for translation	ALL	10 <sup>th</sup> August
Send Teachers Handbook text to James for editing	ALL	15 <sup>th</sup> August
Send drafted Teachers handbook to Team for comment	James	End August
Design Posters and send to Team for comment	Kamran	End August
Get approval for posters if needed	ALL	By mid September
Return comments on Teachers handbook to James	ALL	By mid September
Comment of poster design and send suggestions for change to James and Kamran	ALL	10 <sup>th</sup> September
James to edit comments and send to Kamran	James	15 <sup>th</sup> September
Printing of Posters	Kamran	By end September
Send Teachers Handbook to Team for translation and copying ready for Teachers workshops	James	By end September
Distribution of Posters	Melina and ALL	During October
Workshops can start (don't plan for earlier than December)	ALL	From November

##### **B. The posters**

###### **B1. Poster 1 – Comments and decisions**

- Title should be larger
- Map of Caspian should be a geographic map and should be a little smaller (JH to prepare ToR) and should include the flags of the nations.
- The Satellite image should be larger (JH to prepare ToR)
- Modify the flyways map
- Include titles for each of the images
- Eco systems services – have a bigger picture - basically an ecosystem service is a service that the natural environment provides for people and wildlife. There is a difference between Ecosystem services and natural resources. For example, water is both a resource (for drinking) and services (as part of a wetland, it can clean dirty water) (JH to prepare ToR). Maybe this needs to be sketch OR a series of photographs of these services (air, water, forests, and so on).
- Delete the sustainable development diagram from this image
- Delete the Sholokov quote (nothing to do with biodiversity really)
- Add the images of species in Caspian

- I will provide a diagram to illustrate species diversity more
- Increase the size of the Khazer Nature reserve diagram
- Add numbers to each of the diagrams

### **Action**

**ALL Asan produced a list of animals that we need photographs for. Please see the attached list and send any images to Kamran if you have them. Asan has noted the ones he already has. Can you provide any others?**

### **B2. Poster 2 - Comments and decisions**

#### *Please add*

- More underwater vegetation
  - More wetlands – possible near the front
  - Bottom feeding fish
  - Make the sturgeon more obviously eating fish – make it clearer who is eating what
  - Show mud, mosses, algae and so on
  - Baby seal – a bit greyer and maybe bigger
  - Larger seal – maybe with a slight hump and patches on the skin
  - Need examples of terrestrial life – snakes, insects dragon fly and frogs.
  - Add some forest – behind the birds
  - Add an egret
  - Reeds and some surface water plant life
  - A duck underwater (grebe)
  - Add a grebe near flamingo
- The artist can add these to the current picture – we have investigated the cost of repainting the picture and it will be too high for our budget – so we have to accept what we have – sorry!!
  - Other suggestions were made relating to the design of the poster – we shall leave this to Kamran.

### **I DON'T HAVE THE REVISED TABLES FOR POSTER FOUR**

**PLEASE NOTE THAT THE COMMENTS BELOW ADD TO THE IDEAS WE DEVELOPED IN MOSCOW AND AFTERWARDS.**

### **B3. Poster Three**

We agreed a number of changes to poster

#### **Action**

**Irina Write / or find the newspaper, internet and report statements and send to Kamran**

**Oleg Find data as agreed to decline of numbers of species- or animals within a species and of jellyfish (can never spell the name!)**

**ALL we need images of dead/injured animals (a dead seal?)**

**Irina Photograph of a near collapsed species (Saiga?)**

**Assel Approach Chevron for images of a place before and after oil exploration in Kazakhstan. There must be some somewhere!! To illustrate Habitat decline.**

**Chengiz Please research (quite quickly!!) a painting that shows some natural coastline in and around Baku showing an area that has now been built on. The images from the calendar probably aren't good enough I'm afraid. It would also be good to get a small map to show the location of this image if possible**

**Aleksey I don't think that the map of dams along the Volga will work as an illustration. This just shows the location of dams but does not actually show habitat loss that results from the dams.**

Assel and Chingiz – we really need this kind of data as other wise the posters will have too may photographs – we need more variety.

I have attached

#### **B4. Poster Four**

This will be a montage of images showing that human activity is the main reason for **biodiversity loss**

#### **Action**

**? Someone has a list of the images that Lilya provided to Kamran - can this be sent to me please so that I can check that we have all the necessary images for the montage.**

**JH I have attached a revised version of the Table myself based on what I would like to see there as well.**

#### **B5. Poster Five**

See attached revision

**JH I have attached a revised version of the Table myself based on what I would like to see there as well.**

#### **B3. General points for each poster**

- Each poster will have the logos of CEP, FSC, Darwin AND the logos of each participating organisation
- MAKE SURE ALL POSTERS HAVE THE CEP CASPIAN SEAL ON THEM
- Each poster will have some design feature – possibly a blue strip along the poster or possibly a montage of photographs (but this would take time and it would be unlikely that we would be able to get the images together in time)

#### **Action**

**ALL Send logos to Kamran in an appropriate format – they do not have to redrawn (DO NOT SPEND MONEY ON REDRAWING YOUR LOGO – KAMRAN CAN DO THIS). If your organisation does not have a logo you cannot spend project money on designing and drawing one. Simply the name of your organisation will be on the poster.**

**JH Liaise with Kamran – about reproduction of the painting and getting it from Moscow.**

#### **B6. Poster Approval**

Please make sure that approval is obtained for the posters – but only start this process if approval is really needed. Often it is the case that posters can be used by teachers without the posters being approved – in fact I know this is the case in Russia, Kazakhstan and Iran – where I have worked in schools! So please don't start a process of approval if it is not needed. It will only slow the process down. However, we have to bear in mind that we are distributing a LARGE number of posters!!

In addition the posters have the CEP logo on them and CEP is our partner – this means that the CEP Representatives in each country (SAPICS) should also be able to help with any approval process.

#### **Action**

**MS Send names of SAPICs to all country coordinators and a list of schools that CEP works with.**

**ALL Contact Melina who will provide a letter if needed (I forget what kind of letter – but a letter is always useful!!)**

## B7 Numbers of Posters

Country	Number National Language	Number Russian
Azerbaijan	800	200
Iran	1250	0
Kazakhstan	600	400
Russia	1000	
Turkmenistan	600	150

Note – 5 x 1000 posters weighs 540kg!

### Action

**ALL Please let James know if you want to change the number of posters**

## C. Teachers Handbook

### C1. Contents

Section	Author	No Pages
Introduction	James	.5
Biodiversity of Caspian - General	Hamid	2
Country Biodiversity	Each country	1 page each
Poster 1 - Background	Assel	1
Poster 1 - Background	James (support from Keti)	2
Poster 2 - Background	Assan	1
Poster 2 - Background	James (support from Ludmila)	2
Poster 3 - Background	Oleg	1
Poster 3 - Background	Irina	2
Poster 4 - Background	Aleksey	1
Poster 4 - Background	Lilya	2
Poster 5 - Background	Svetlana	1
Poster 5 - Background	Irina	2
Teaching Methods	Irina (support from Ludmila)	2
Additional sections (glossary, references)		

### *The structure of each activity*

Each poster should have Background and Additional Data –

And each activity should have a -

- Title
- Goal
- Background
- Description of the activity (and give answers if these are needed!!)
- Additional Data if needed
- Links to the curriculum in each country
- References

### Remember

- The activities should be varied – games, role plays, decision making and so on
- They should be focused at 11-14 age range
- And be relevant to Geography and Biology
- And follow the approaches we covered in the training session.

## Action

**ALL Write sections as listed and send in English to James by 15<sup>th</sup> August**

**Send Russian versions to Nadya (email address – [nadintr@yahoo.com](mailto:nadintr@yahoo.com) – by 10<sup>th</sup> August to give time for translation into English.**

## D. Teacher Training Workshops

### D1 Who are the workshops for?

You are expected to run a workshop for teachers – from a minimum of ten schools. In some countries there will be more than ten schools. These are the schools that will take part in the biodiversity monitoring in phase two. It is suggested that Schools Directors can also attend – at least for part of the day, so that they can offer support for their teachers. Really you should have no more than 30 people in the workshop otherwise activities are difficult

### D2 Programme

The workshop programme will vary from country to country – but should include a mix of the following ingredients. The workshop should be as active as possible. Teachers “teach in the way they have been taught” and so a lecture based workshop dominated by a continually talking trainer – will lead to lessons where the teacher talks all the time! The learning cycle and other theories apply to workshops as well as lessons!

1. Welcome (see the ideas on how to start a workshop- they will be sent to you later)
2. Maybe a key note speaker – if there is someone that could provide a good interesting keynote presentation.
3. Sustainable Development and Biodiversity – using an active learning format if possible – there are several ideas in Ken Webster’s Book that you have all been given. The three circles activity is a good way of starting.
4. Mention that the workshop is supported by the Darwin Initiative and is in partnership with CEP and FSC.
5. Short presentation of your organisation
6. Setting the scene – Biodiversity in the Caspian – a series of power point slides (partly take from the posters)
7. Biodiversity education – why and for what? A series of power point slides (can be combined with the Setting the scene?) For this and the previous Setting the scene we shall try to put together a series of power point slides for everyone to see and email these to the team
8. Introducing Student Centred learning/interactive learning (PLEASE don’t do this a lecture!!) – giving them an activity from the Teachers’ Handbook and reviewing this is a great way of doing this – this can be FOLLOWED by a presentation.
9. Review of the posters – have the posters along the wall and briefly describe each one and the kinds of activities that teachers can do.
10. Lesson Planning – divide the participants into five groups and get each group working on one poster. Ask the groups to review the lessons that are already prepared and then plan one more (or brainstorm ideas for more).
11. Action Planning – do get the teachers to say what they are going to do as a result of the workshop. One method is to go round the table and ask teachers what their plans are – or it could be done in written format.
12. Workshop evaluation – a evaluation form will be sent to you for adaptation

After the workshop we shall need a report from you – the **format for the report is**

- Short summary description of the workshop and you evaluation of the success of the workshop – did it achieve the objectives we set out to achieve?
- Workshop Programme
- Names and full addresses of all the schools and teachers that attended
- Five photographs of the workshop
- A summary of the review forms

## Action

**ALL** Send budget information for workshops

**JH** Send information on how to start and finish a workshop

**JH** Send a power point slide about Darwin and FSC to all

**MS** Send a power point slide about CEP to all

**ALL** Start preparing the workshops (locations and selection of schools if not Already done)

## D3 Budget Notes for workshops

- There are no extra fees for trainers – the trainers should come from your development team
- It is expected that the workshops will be for one and so very few- if any – delegates will need overnight accommodation.
- We can pay for teachers travel but this must not be excessive.
- If running a workshop in a distant location the general rule is the trainer travel not the teachers (this cuts costs) and two trainers are all that is needed for a day workshop.

## E Questionnaire

- It was agreed that we shall give the questionnaire to all the teachers attending the workshop
- Administer to TWO classes of children that teachers intend to use the posters with. The questionnaire will have to administered by the Development team members to make sure that it is done fairly.

## Action

**ALL** Comment on the draft questionnaires that have been developed (see attached)

## F. Promotion of the Project

We need to start the promotion of the project more actively – this means

## Action

**ALL** Put information about the project on your web sites – together with the Darwin Logo, FSC and CEP logos. You can also put your own logo on the site and please mention all the partners. Use the text already sent to you to (the letter to the Minister)

**ALL** Put a short report of this meeting on the site together with a few photographs.

**JH** Responsible for wider promotion including an article for CENN Magazine and news pages, also on other networks (Hamid – Ramsar; Aleksey – CEI network; Melina – to CEP NGOs.)

## G. The Monitoring

We decided (after a lengthy discussion!) to develop a key and a process for monitoring birds that can be seen in and around wetlands.

*Some Criteria and issues were discussed for the selection of the species*

A. It was stressed that there is a difference in

1. Observing nature
2. Monitoring biodiversity

Obviously the second is a sub set of the first BUT we should remember that our project is about the second – this has implications for what we select to observe and how we organise that observation. It will be important for young people to realise that they are part of a whole Caspian process for observing something!! ***This is exciting!!***



- B. Whatever we select for observation should be *accessible easily* for all students whichever country they are in.
- C. Whatever is selected must be relatively *easily identifiable* by school students without using any specialist equipment.
- D. The species we select *don't have to be found everywhere on the Caspian* – differences in distribution can be part of the learning from the monitoring process.
- E. Selecting birds is great because one section of our key can focus on the *migration process*.

This Key will include

- Information about the seasons
- A reporting format for teachers
- A feature will be monitoring the migration of birds.

Data can be sent to the project through

- Directly being added to the site
- Email
- Post

### Action

**? I am not sure who has the list of birds that was developed during the workshop – but whoever it is – can you send it to me please?**

**Hamid Can you arrange for the list to be checked by an expert somewhere.**

### H. Web Site

We shall create a content managed web site for the project.

#### H1. A basic structure for the site will be

Front page	menu - teachers / students (in all languages)
Teachers	menu – news / resources (including lesson plans) / monitoring / links
Monitoring	menu – add data / search data (the first requires a password)
Search data	menu – Search species / search month (or group of months) / Choose map / Choose Table
Choose Map	(we shall divide the Caspian into monitoring zones and data will be entered according to zone) – the map will show the number of the selected species in each zone using some graphical symbol (bar chart for example)
Choose Data	The data will show the number of species observed (the same data will be on the map) AND the number of observations made to collect that data (see table below for an explanation) – we possibly need some other form of data representations to show the relationship between the variables.

Name of species	Flamingo	Month	February
Country	Azerbaijan		
Coastline Zone	Number of birds	No of groups returning data	
1	20	10	
2	10	1	
3	0	5	
4	0	0	
5	15	10	

**Action**

**ALL** send names of possible web designers to James

**JH** send terms of reference details about the web site to Team by the middle of August

**JH** meet with HA and AK to discuss data collection methods.

## Appendix 2

### Structure of materials and samples of materials in first draft

#### C. Teachers Handbook

##### C1. Contents

Section	Author	No Pages	Received
Introduction	James	.5	Yes
Biodiversity of Caspian - General	Hamid	2	Yes
Country Biodiversity , each country, 1 page each			
Iran		<b>These descriptions are needed please!</b>	
Azerbaijan			Yes
Russia			
Turkmenistan			
Kazakhstan			
Poster 1 - Background	Assel	1	
Poster 1 - activities	James (+ Keti)	2	Yes
Poster 2 - Background	Assan	1	Yes
Poster 2 – activities	James(+Ludmila)	2	Yes
Poster 3 - Background	Oleg	1	<b>Needed</b>
Poster 3 - activities	Irina	2	Yes
Poster 4 - Background	Aleksey	1	Yes
Poster 4 - activities	Lilya	2	Yes
Poster 5 - Background	Svetlana	1	<b>Needed</b>
Poster 5 – activities	Irina	2	Yes
Teaching Methods	Irina (+Ludmila)	2	Yes
Additional sections (glossary, references)			

#### *The structure of each activity*

Each poster should have Background and Additional Data –

And each activity should have a -

- Title
- Goal
- Background
- Description of the activity (and give answers if these are needed!!)
- Additional Data if needed
- Links to the curriculum in each country
- References

#### **Remember**

- The activities should be varied – games, role plays, decision making and so on
- They should be focused at 11-14 age range
- And be relevant to Geography and Biology
- And follow the approaches we covered in the training session.

## Posters

### Posters and Teachers Guide

## What is biodiversity? – and why is it so important?

**Kamran – I sent comments on Poster 1 to you – can you integrate these comments into the next version of the poster please?**

### Message

**Caspian Ecosystem is unique for biodiversity globally**

This poster will focus on ecosystems and their importance and biodiversity within that

<i>Image/content</i>	<i>What for - description</i>	<i>Who</i>	<i>Notes</i>
Definition of biodiversity	Maybe from the CBD	<i>provided</i>	
Quote from an important person	About ecosystems and biodiversity and the fact that we rely on them for life	<i>We have deleted this image</i>	
Wetland – Iran <b>DONE</b>	To illustrate one ecosystem around Caspian Image showing a lush wetland – reeds – birds – flowers. <b>NOT</b> tourist image	<i>Aleksey – please provide a really green picture of a wetland</i>	
A contrasting ecosystem <b>DONE</b>	Turkmenistan Korabogazgol or Aktay desert and rocky area	<i>Kamran – have we got a good image of a drier area – one of the Turkmen images for example? Kamran – should we add an urban image as well? We can use image that Chingis has provided for Baku – I have</i>	
Map of Caspian	This should show the location of different kinds of ecosystem – habitat. Also show bird migration routes.	<i>I think we discussed this in detail. Aleksey – I have described the map we need. I really don't understand why this is so hard. It is a basic geographic map that any University department must have.</i>	
Bird Migration routes	Map provided	<i>See description below of how to edit this - for some reason Kamran this has got missed off the Poster 1 – can it be put back on please? Please add route map back</i>	

Satellite image of Caspian	This shows the different kinds of vegetation around the Caspian.	<i>This has been provided and needs to be larger</i>
Caspian species	Illustrations of flora and fauna around the Caspian -	<i>We have a list and the images are being provided by the Team. Ludmila's image 47 is a good one of a snake! Aleksey – can you check these species and provide one of a fish – I am not sure how good these pspecies are - has this been done Aleksey?</i>
Quotes from the Koran and Bible		<i>provided</i>
Statistics	Index of biodiversity – <b>and comparisons</b> – red book species – number of habitats around the Caspian	<i>Please make this diagram larger -</i>
Sustainable Development Diagram	The three circles – to show that should live within our natural capital limits	<i>Moved to poster 5</i>
Hierarchy of biodiversity <b>DONE</b>	A triangle to show the global diversity of species	<i>I will provide this – this replaces the three circles We have deleted this- but please move it to Poster 5 I have provide the triangles – but again they need to be bigger</i>
Ecosystem/ biodiversity services	I think that we shall need two diagrams – one to show what we get from nature and the other to show ecosystem services. Descriptions are below	<i>James to provide descriptions – see below – this is now fine but we need a better image of a reed bed please Aleksey- have you done this? Have we got decent image of a family yet?</i>

### What we get from Nature

This should be the photograph/or drawing – of the family. I think I have described this before – Basically – just at breakfast in the kitchen – making sure that you can see electric lights and the taps for water (they could be running)

### Ecosystem Services

We don't need to show them all – but I have decided that it is difficult to get the idea of these from the family picture. The family picture is all about the RESOURCES we can get from nature – not really the SERVICES nature provides – and they are different. We just need two photographs to show examples really. The details can go in the teachers guide.

For example – air is “cleaned” through forests that absorb CO2 and give out Oxygen. Water is similarly “cleaned” through being filtered in reed beds.

Would it be possible to have -

- a photograph of dirty water (water coming from a dirty water pipe into a river) and then a second photograph of a reed bed (the name given to an area of reeds – I am sure that Hamid has a photograph of these) – followed by
- one of Ludmila’s photographs would be ok as well (the one with the flowers) – followed by
- Clean water coming from a tap or a bottle of clean water

The Teachers notes can help make the links -

### **Physical Geography Map**

- This should have on it the major rivers and cities along the Caspian Coast –
- The rivers should not be named but the cities should be named
- The height of the land should be shown
- The depth of the Caspian should be shown
- Latitude and longitude lines should be one the map (at least one of each – to show how far north and south places are and east and west)
- There needs to be a scale and a north point
- And a key

### **Diagram of biodiversity – a pyramid of species**

I will look for this and send it to you – there is sure to be one in a book somewhere!!

### **Flyways**

This can be a simple diagram in the style of the first version of poster one – with the flyways being shown by lines of birds. We only need the two flyways I discussed with you and only the countries the flyways cover.

## How does biodiversity work?

I think we covered this – we shall wait for the revision of the image by Natalia in Moscow and then find a way of getting the image to you. Can you liaise directly with Aleksey about this?

<i>Image/content</i>	<i>What for - description</i>	<i>Who</i>	<i>Notes</i>
			<p>This poster will be one large picture – specially drawn – to show a cross section through part of the Caspian from the mountains through the shallow Caspian and then into the deeper Caspian. .</p> <p>The drawing should illustrate the species found and how they relate to each other. So for example, there should be an illustration of something eating something else. Waste should be on the diagram. There should be no people. The species should be numbered. The diagram should include the sun to show that ecosystem energy comes from the sun.</p> <p>The idea is NOT to put arrows or illustrate food chains/webs of anything on the poster – but just to have the picture. The picture can then be used in an ACTIVE way by teachers. See the suggested activity that I have attached.</p> <p>The teachers book will contain outlines of the picture that can be photocopied, so that the students can discuss and draw on the outline.</p>
			<p>ALL – Aleksey – we are looking for good artist draw this based on a good ecosystem diagram. Aleksey has identified someone and I shall check his/her work</p>

# What's the state of biodiversity in the Caspian?

## Messages

- Biodiversity is in decline
- We have the potential to destroy it - “once it’s gone its gone” and “if one species goes – all can go”

Assel and Chingiz – we really need this kind of data as other wise the posters will have too may photographs – we need more variety.

I have attached

<i>Image/content</i>	<i>What for - description</i>	<i>Who</i>	<i>Notes</i>
A newspaper headline, a web page and a Report extract	To show that the Caspian Sea is under real threat.	<i>Irina – can you provide these? I wil write some text for these if Kamran could design them to look like a newspaper</i>	
<b><i>Species decline</i></b>			
Data on species decline – numbers of species decline of one species increase on another species	Data about species decline –	<i>Oleg – can you find these from CEP documents – Aleskey – can you find this data?</i>	Data will be redrawn in simple style in the form of a graph – they should all be shown t show the same message – decline. They should also allow children to interpret that if the decline continues the species will disappear.
Images of declining species	Is possible a picture of a dead seal or other species possible?	<i>Kamran from internet – something really emotional!! Aleskey – can you find this -</i>	
Image of species increase	An invasive species – jellyfish	<i>Is there a suitable image of the jellyfish? Aleksey – can you find this</i>	
Photographs of a collapsed species	To demonstrate that we have the power to destroy a civilisation. Maybe Saiga – but this has not collapsed	<i>Irina – can you send a good Saiga image please?</i>	<b><i>Kamran – I am tempted to use a photograph of the Aral Sea here – this is an ecosystem we have completely destroyed. The “problem” with Saiga is that we have not yet destroyed it!! The Aral Sea however can never now be replaced. Aleksey and Kamran - FORGET SAIGA – can we have an Aral Sea image</i></b>



			<b>please.</b>
<b>Habitat decline</b>			
Volga Delta – “before and after” maps	<i>Aleksey I don't think that the map of dams along the Volga will work as an illustration. This just shows the location of dams but does not actually show habitat loss that results from the dams.</i>		
Photographs of Tengis oilfield before and after (approach Chevron)	<i>Asel Approach Chevron for images of a place before and after oil exploration in Kazakhstan. There must be some somewhere!! To illustrate Habitat decline Aleksey – Can you get some Caspian images from the an oil company – the two images I mentioned that were I the article I showed you – just to show the damage from oil (Sulphur blocks – big oil exploration) Asel</i>		
Painting – Baku before and after	<i>Chengiz Please research (quite quickly!!) a painting that shows some natural coastline in and around Baku showing an area that has now been built on. The images from the calendar probably aren't good enough I'm afraid. It would also be good to get a small map to show the location of this image if possible – Chengiz has done this and I have sent it – they look good!</i>		
Cartoon	Ask Iranian cartoonist to draw a cartoon showing the seriousness of the decline	<i>Hamid – pleas follow up – I have sent the ToR to Alireza.</i>	
Global Issues		<i>I will look for some statistics of global biodiversity loss. Alekey – can you do this – some global figures</i>	

# What's causing biodiversity problems?

## Message

- Human activity is the main problem

<i>Image/content</i>	<i>What for - description</i>	<i>Who</i>	<i>Notes</i>
Cartoon	Something that shows “its not me who is causing the problems”		I have asked an Iranian cartoonist to do some images – and this is one of them. I will send you his address and the ToR for the images. I have another image that will be sent to you. <b>DONE – forget the Iranian cartoonist – no reply to my emails</b>
Diagram	To show complexity – there is rarely a simple cause and effect!		<b>I am still thinking about this - if I can get something done by next week we can use it</b>
<b>Consumption – our desire for more</b>			
<i>In the following pairs of images we want to link the problem – with our consumption – to show the “chain of impact”</i>			
Oil extraction – people buying petrol for cars -	- and a picture of shareholders in a western European context – or BP Head office in London		<b><i>I will look for the shareholders image – Can you find one – maybe through an oil company I think we need a better oil extraction picture than the one Ludmila has provided – see some of the attached. Aleksey – can you find one</i></b>
Oil again			I have sent you a scanned image of oil pipeline routes across the Caspian – can we include this please – in a redrawn format? Teachers can raise all sorts of economic and political questions <b>DONE Aleksey – can you find a map of the oil fields in the Caspian</b>
Over fishing (a large trawler? – people eating fish	<b><i>We have pictures 15,16 and 17 from Ludmila – does one of these these look ok – 16 looks a bit dark and 15 a bit old?</i></b>		<b><i>We also have the pictures of the Caviar. The one with the prices on. Looks the best (14) – this is probably form a real shop!!</i></b>
Farmers using pesticide maybe by a river – a picture of cheap food	The photograph could have a caption coming from the person saying – I want more and more cheaply!		<b><i>I would still like an image like this! Aleksey – can we find anything that looks like farmers using pesticide – or maybe an big agro business image – or even just some pictures of pesticide bags.</i></b>
<b>Destruction of Habitats</b>			
Destruction of land for buildings	Tourists enjoying the beach – be careful of image – we need to use it in Iran OR – land taken for housing.		<b><i>Hamid took an image from the Beach of the Hotel to show resort development – can you get this from him please? I have written to Hamid to ask him to send it – has he done this?</i></b>
<b>Natural Factors</b>			

Photograph of sea level rise	A “then and now” image or a map to show that the level of the Caspian is changing	<i>I think we shall be deleting this one – it is just too difficult. HOWEVER – we do need to show that some changes are natural. Any ideas Aleksey ?</i>	
<b>Rural Poverty</b>			
Someone hunting – but obviously a poor person	Some illustration of poverty – a poor home? Poorly clothed children? Poverty statistics?	Aleksey	<b>Aleksey – any change of finding an image ? Obvious povert from Central Asia though.</b>
<b>Global issues</b>			
Graph to show how climate is changing	<i>I can send you this graph – it can be redrawn- but should stay as a line graph.</i>	James	Graph can be redrawn- DONE
<b>Decision making</b>			
Photograph of an international meeting	The teacher’s notes would explore issues about political disagreements being a major cause of problems!!	<i>We need one image of old men talking! Can we find an image of an international agreement. Aleskey to find?</i>	

It is recommended that we look at the CEP Transboundary Diagnostic Analysis on the CEP website as an introduction to the problems. We must make sure that we are not biased in the way the problems are presented and we need to check our figures.

## 5. How can we help protect biodiversity?

### Message

- Biodiversity CAN be saved
- Through a mix of personal action, processes and policy.

<i>Image/content</i>	<i>What for - description</i>	<i>Who</i>	<i>Notes</i>
We all need to rethink - Rethink, Refuse, Repair Reuse, Reduce, Recycle post card – <i>I have emailed you this</i> But Biodiversity CAN be saved. This can be a cartoon. JH to develop ToR But individuals don't have control over everything JH to develop ToR for another cartoon <i>I have developed these ToR and sent them to a cartoonist – Iranian. Hamid is making contact with him so lets see what he comes up with</i>			
<b>Individual</b>			
Different actions	A montage of different actions with big ticks or crosses through them – such as washing a car in a stream – buying poached fish – buying a product with an eco label and so on.		<i>I forget what images the group suggested – I think that we so need positive images here. For example – an eco label from an electric product – we need a lot of “bad” and “good” images here – if we can find them OR just get someone to draw them. The bads can be drawn – in dark colour and the goods in a bright colour. I have asked Janet to send you an image from a recent journal – she can scan it the right size I hope!!</i>
<b>Community</b>			
Education –	Picture of an eco lesson inside or outside Picture of children's action Picture of child writing a letter to government “Dear President Putin”...		<i>There are some photographs on the CEP web site of children and young people's activities around the Caspian – can you talk to Melina about these? Maybe they are not good enough quality? I think Melina has given some references – are they good enough? If not – can you source some Aleksey?</i>
NGO activity -	NGO meeting or Sobotnik		<i>Ludmilla has an image (no 30) but it is not really good enough. Although it is meant to be people helping spawning fish it could just as well be poachers! Aleksey to provide</i>
Community education	<i>Does Hamid/ Melina have a photograph of a group of people from a community talking – or a photograph of the Biodiversity Museum in Tehran? Or a copy of someone else's poster. Some community education activity. Aleksey to provide</i>		
<b>National</b>			
Protected Areas	Map of protected areas around the Caspian		<i>Aleksey will be sending this to you- I am sure you have done this Aleksey</i>
Enforcement of legislation	Photo of Department of Environment officials enforcing legislation		<i>Ludmila's photograph number 18 looks quite good here.</i>

<b>International</b>		
CITES	Picture of Caviar – the teacher’s notes can cover the content.	<i>I am looking for some images to represent international agreements in an interesting way. Wish me luck!! It might just be a collage of logos I am sure we have sent images of Caviar – and I hope they are good enough.</i>
NGO action	Photograph of NGO action from Seattle or one of the WTO protests.	
International agreements	Forestry Stewardship logo	
<b>Better Ways of doing things</b>		
Business is trying	Copy of a BP or other business advert saying how they are trying to protect the environment	<i>Can we go to the BP web site and find something – I will contact their corporate affairs person in the UK – it would be good to ask BP if they had a good copy Aleskey.</i>
New economic systems	See my comments below	<i>The three circles graph please</i>

There are a number of issues on Poster Five that also need to be included . From a philosophical point of view the problem with poster five is that we need to emphasise a few more global solutions.

I would like some images of

- A solar car
- Solar panels

The purpose of these in the activities will be to demonstrate that we need an alternative energy future!

I would also like you to use the two diagrams I have attached – the Take Make Waste Diagram and the one with the two cycles. These will both be explained in the Teachers Handbook - don’t worry.

I know that you want this poster to be just positive images and so if you want to you can put the Take / Make and Waste diagram on poster 4 .

## Teachers Guides

- There should be between 5 and 10 activities per poster
- Aimed mainly at Geography and Biology but with opportunities for use by other subjects
- There should be a section linking the activities with different curriculum opportunities.
- There should be a section about biodiversity
- There should be a section on environmental games and activities that can be played by students and practical work as well.
- Activities should take a range of approaches – role plays, decision making activities, data analysis and so on.

### How to work with posters

You can use the poster to support your teaching about different subjects in the curriculum. Using the posters it is possible, not only to ask questions, but to put the learning process into an interesting form. The most interesting methods for children of the junior and middle school age, use games. These include research elements, practical work on cards and so on. Of course you can adapt the games as you wish and be creative yourself!

#### **Some teaching games you can use**

##### **1 Game “What do we know about Caspian biodiversity?”**

The goal is to engage the children into the process of studying of the poster content.

Each student working individually or in groups, looks at the posters and prepares one question, the answer to which he or she knows. The student assesses its difficulty in points (for example, 1 to 5 points). The student writes the question on a post it note. The students can cut the post it notes into interesting shapes if they want to. For example, if the question relates to the life of animals, the students cuts the shape of an animal, if it is a plant – then a leaf and so on

Before the start of the game, the students put their questions on the poster using scotch, stickers, etc. The class is divided into groups and selects the order of answering. Then the children select questions according to the points and provide answers. The team, which gets the most points wins. The teacher gives marks to the children, who gave correct answers and got a certain number of points. This game suits poster 2 best.

**Note:** The questions may be not only about relations between the objects of the ecosystem, but other topics as well, such as loss of biodiversity and so on. In this case, you can ask the children to put the question at the object of the Caspian ecosystem. On a piece of paper present the marine environment with the help of the blue film; show the surface layer, bottom and coastal zone. Before the start of the game, the children put their questions on a corresponding place; the game starts in the same way as in the first case. For example, at the biology or ecology lesson, when the food chain has been studied it is possible to conduct the following short game. The class is divided into groups and they have to find examples of food relation on poster 2. The group, which finds the biggest number of pairs linked by food relations, wins in the game.

##### **2. Quiz game**

The goal of this game is to check the student’s knowledge of the posters.

Using Poster 2 you can organize a quiz. You can use questions on Poster 2 from the methodological manual as tasks for the quiz. Make a spot of clean Caspian water (made out of cardboard or transparent film) for each correct answer - it will be a motivation for students to take active part. The winner is a student/group, who gets the biggest number of drops. He/she will be a Caspian Keeper. You can develop any idea for the game.

### 3. **Environmental Discussions**

The goal is to engage the emotional and learning element of student's consciousness to get them into the problem.

This form of work can be used when studying the topic "Reasons of Caspian biodiversity problems". The class is divided into 2 groups: supporters of a reasonable attitude to nature and supporters of consuming approach to nature. In the discussion representatives of both groups defend their points of view. It is important to control that arguments presented by each side are persuasive enough – in other words - well justified.

You can obviously be creative and organize discussions about any poster - selecting your topic carefully.

### **Classic Teaching Methods including teacher stories**

#### 1 **How does biodiversity work?**

The goal of this activity is to introduce the children to the role that biodiversity plays in the sustainability of ecosystems. For example, biodiversity on our planet has never been stable. In the evolution process changing environmental conditions some species disappeared from the biosphere. If these processes happened quickly, then biological balance was broken and population of some species increased rapidly and for others – decreased quickly and the functioning of the ecosystem ceased as it couldn't provide conditions of organisms to live in. If those changes happened slowly then an ecosystem could continue functioning and provide life for other species. Biological diversity of species, which live in the ecosystem, ensures sustainable state of the ecosystem.

As you explain the importance of biodiversity tell the class they have 5 minutes to look at the poster – after that it will be covered and working in team they have to list down all plants and animals they have seen on the poster and name them. Different tasks could be given for different posters

#### 2. **Practical methods of nature study**

Nature is studied by various practical methods. The main are – observation, experiment (test), measurement.

Observation is one of the methods to study nature. This method is probably the safest for nature, as it is based on visual study/observation of objects, events, etc. In order to make events or objects closer the researcher can use optical equipment: magnifying glass, microscope, binocular, telescope, etc. Photo and video cameras are used to fix events and objects. Observations can be regular (periodical) to collect info about any object of nature, event, etc. In this case results of observations are generalized, based on that conclusions are made, which become valuable scientific information. In this case observation is called monitoring.

The kinds of things you can observe are -

- Study of objects and events of natural ecosystems,
- Study of interlinks between objects of ecosystems,
- Study of impact of one event or object on the state of the environment in the ecosystem,
- Study on an ecological problem



- Study of human activity impact on the nature ecosystems (or objects),
- Collection of information about an object.

One good topic to investigate is related to birds – this is easy for any teacher in any school to do. Part of our Darwin Project will provide teaching resources and idea for wetland bird studies – so look out for these materials to be produced. But in the meantime – here are some general suggestions for how to organize a bird study.

**(a) Examples of seasonal bird observations**

In early spring tell the children to write down the first observation with the migrating birds and ask them to draw the birds they like. In this way, during the spring season you can collect information about types of migrating birds and permanent “residents” and prepare a conference based on the results of the seasonal observations.

If observations are conducted occasionally and irregularly, they can be used as an introduction to the object or event of nature. However, even single observations conducted at the same time in different places can provide valuable scientific knowledge. Usually, such observations are conducted at the initiative of a scientific organization, for example Bird Conservation Council of Russia or Bird Life International.

You can prepare observation cards in advance and organize nature observations. If observation is done by the whole class, then it is reasonable to divide children into groups. Each group will get a different object of observation and a special task. It is useful to give each student or group a data collection form for them to record their observations.

Example of card for bird observation

Surname, name, patronymic

Date and time of observation

Place of observation (settlement)

Habitat (underline): Seaside, Bank of the river, pond, lake, Forest , Agricultural land Park in a settlement , Bog Other (put down) \_\_\_\_\_

How many birds have you noticed over the time of observation \_\_\_\_\_

How many and what type do you know \_\_\_\_\_

How many types of birds don't you know \_\_\_\_\_

Please note the species, which had the biggest number of them in the Table below

Name of type/specimen	Number

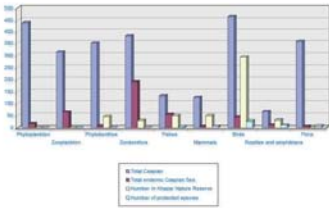
**Appendix 3**  
**Nearly completed posters**  
**Poster 1**

# What is biodiversity and

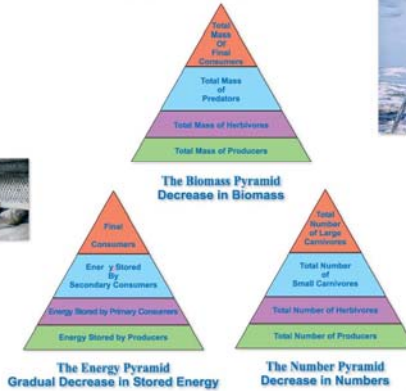
why's it so important?

"In the beginning God created the heavens and the earth. And God saw all that he had made and it was very good. And God put man on the earth to work it and take care of it"  
*From the first book of the Holy Bible – Genesis*

"Pure and transcendent is the God who created all contingent Things in pairs: plants, human beings and other forms of creation unknown to you." (36: 6)  
*Holy Coran: (45:3-4)*



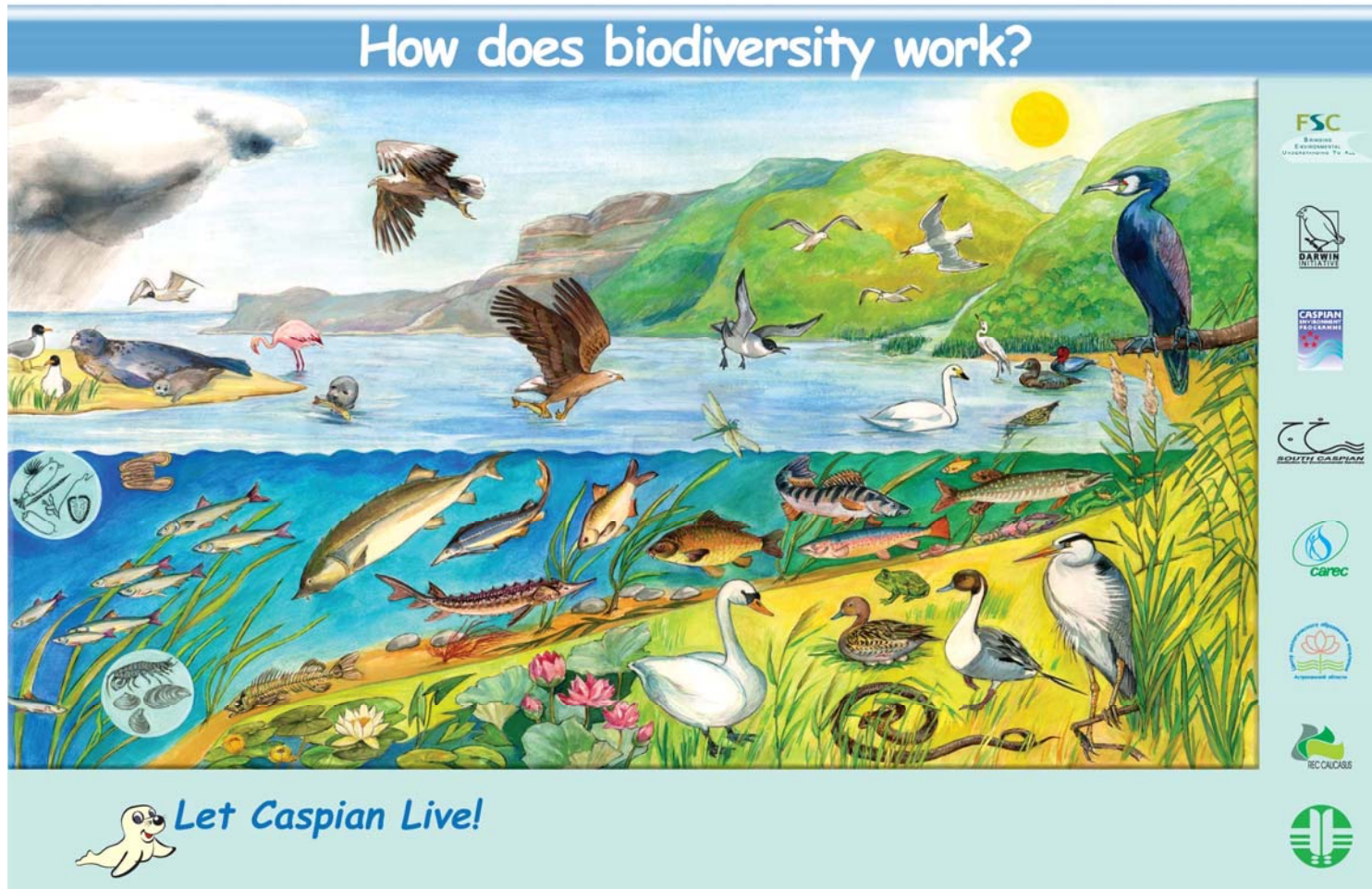
"Biological diversity" means the variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.



**Let Caspian Live!**



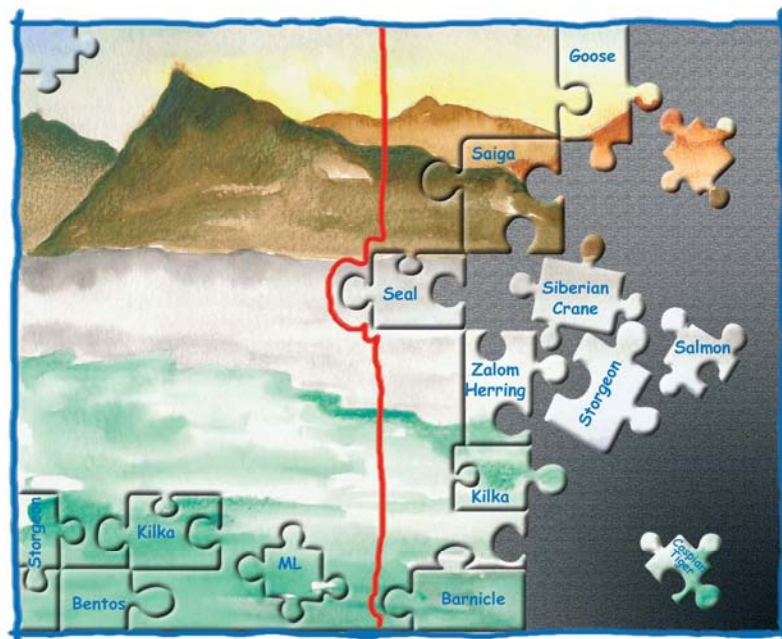
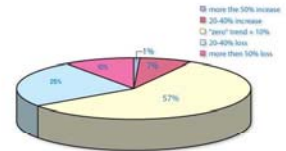
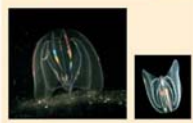
Poster 2





Poster 3

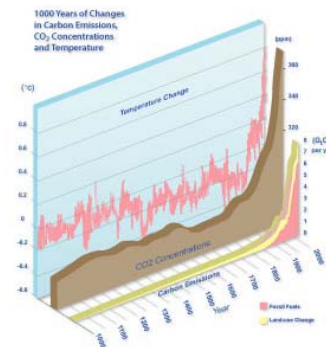
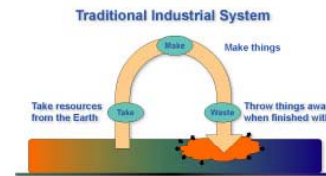
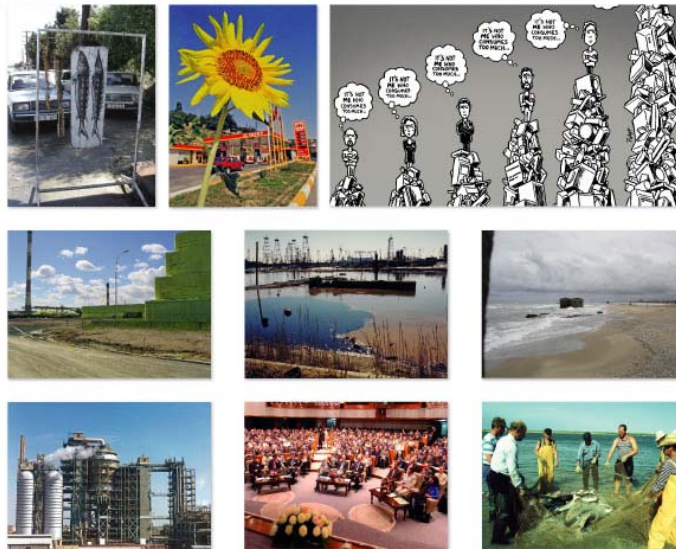
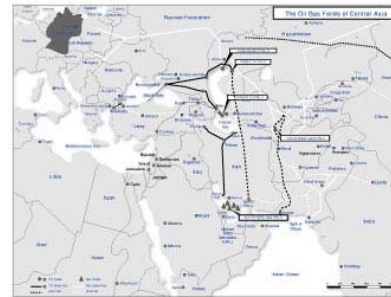
# Let Caspian Live!



What's the state of biodiversity in the Caspian?

# What's causing biodiversity problems?

## Routes for Rivals



Let Caspian Live!



# How can we help protect biodiversity?



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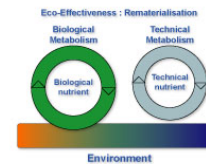
**A growing alternative**  
 We're working to bring the best products of nature to market, in ever more global demand for renewable fuels.  
 > Renewable fuels for aviation

**Products and services**  
 On the road  
 Fuel and services  On  
 For the house

**More for growth**  
 Explore how to reduce emissions and improve productivity in your natural resources.



**RE**think  
**RE**fuse  
**RE**pair  
**RE**duce  
**RE**use  
**RE**cycle



*Let Caspian Live!*