

# MODULE 3: PHOTOGRAPHIC EQUIPMENT

## TAKE BETTER PHOTOS IN NAMIBIA

Claudia & Wynand du Plessis

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- Other photo accessories you **MUST** bring to Namibia

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- Other photo accessories you MUST bring to Namibia
- Crucial equipment mistakes to avoid

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Detailed tech info on equipment in PDF:

>> The essential requirements & specifications that camera equipment should have for wildlife & landscape photography in Namibia

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**Simple & clear explanation on basic tech stuff:**

>> <http://www.exposureguide.com/photography-basics.htm>

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## 1. Essential camera requirements

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>> You will find detailed technical specifications of your camera and lenses in their manuals, or on the website of the manufacturer

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A: Reaction time: Shutter lag & autofocus lag

>> The delay in capturing a shot when the shutter is pressed is called shutter lag, and the delay of the lens to focus when the shutter is pressed is called focussing lag

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- There should be NO noticeable delays

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  - Quick autofocus: NO autofocus lag
  - Near instant shutter release: NO camera shutter lag

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- You'll need:
  - Quick autofocus: NO autofocus lag
  - Near instant shutter release: NO camera shutter lag
  - >> Miss images because of delays will drive you crazy
  - >> NO simple compact cameras + NO Cell phones as your main camera system

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**Recommended:**

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- The autofocus lag should ideally be less than  $0,15$  sec during full and continuous focusing modes

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### **B: Capture speed (frame rate)**

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- for WP the faster the capture speed the better: 10 frames per second or faster is very desirable and necessary to capture the best shot during fast action
- for LP a high frame rate is in most cases of little importance

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>> "Raw image format" means an unprocessed image & allows the photographer to adjust settings like exposure, white balance, and saturation after the image has been captured

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- RAW files need +/- two to three times more space on your memory stick than full-size JPG files

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**Recommended:**

- Shoot in raw format as it gives you the best options for post processing (optimizing your digital images later in a program e.g. Photoshop/Lightroom/Topaz Clarity for correct exposure, colour, brightness, contrast, etc, which is nearly always necessary for serious photography)

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>> If your camera does not capture RAW but only JPEGs be aware that it limits your post-processing options considerably

>> If you intend to buy a new camera, buy a camera that does support RAW mode: allows you best options for post-processing

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- Most cameras that offer RAW mode also offer the option to capture JPG files at the same time
- This is helpful to use JPEGs (that are optimized in-camera already and need little work in the computer) for less serious uses, and only post-process the RAW files that will be needed for more serious/professional uses e.g. large poster prints, calendar prints, etc

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- >> ISO 6400: very light sensitive setting with much more noise (depending on camera)

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>> **ISO, shutter speed & f-stop are correlated; more later on correct exposure in Module 6**

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Recommended ISO setting for very low light situations:

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- >> very good camera sensors (especially full-frame): little noise levels at ISO 6400
- >> all sensors: lots of noise at say ISO 25000 or higher (especially for cropped frame sensors)
- >> rather get noisier & sharp shots in nice light or with more dramatic action happening than a fine quality images in boring light and with nothing interesting happening

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**Recommended sensor resolution:**

- buy camera with very high sensor resolution: great for capturing fine detail (even when zooming into the image)

>> at least 16 Megapixels

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Pros & cons of full-frame vs. cropped frame sensors:

- Full-frame sensors usually produce better image quality with less noise and more sensitivity to details in darker areas than cropped frame sensors, especially during low light and high ISO:  
>> best for LP

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  - >> best for LP
- Cropped frame sensors have narrower field of view for the same lens when used on a camera with full-frame sensor, therefore you get more telephoto effect for the same lens
  - >> a 400mm lens on a full-frame camera stays a 400mm lens
  - >> a 400mm lens on a cropped frame camera becomes a 600mm lens or similar
  - >> best for WP

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- camera sensor-shift stabilization: most compact cameras, but even some full format cameras (Sony, Olympus, Pentax, Panasonic)

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  - >> better for image stabilization when using long telephoto lenses
  
- camera sensor-shift stabilization: most compact cameras, but even some full format cameras (Sony, Olympus, Pentax, Panasonic)
  - >> camera system & lenses lighter, smaller and usually cheaper
  - >> but less effective when using long telephoto lenses

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**Advantages of Image Stabilization:**

>> image stabilization now allows 2 to 5 stops slower shutter speeds with handheld photography: it is now possible to get sharp shots with a 400mm lens at a 1/30 sec

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**RULE OF THUMB** for capturing sharp, handheld images without image stabilization:

- >> use a shutter speed equal or faster than the equivalent focal length of the lens:  
e.g. for a 400mm lens use 1/400-second or faster; 200mm lens use 1/200-second, etc.

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**Recommended:**

- >> If you do buy a new camera/lens: choose a system that offers stabilization, and the latest generation is often better

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## 2. The right lenses to bring to Namibia:

>> Landscape Photography (LP) & Wildlife Photography (WP) often require different lenses to get the best results

# MODULE 3: PHOTOGRAPHIC EQUIPMENT

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**A: Focal length of your lens** (related to full-frame digital cameras):

>> For cameras with cropped frame sensors the same lens will result in an image magnification of at least 1,5 times larger than when using a full-frame camera

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- >> **wildlife is keeping its distance**

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>> wildlife is keeping its distance

>> a very long telephoto lens of 600mm or longer may sometimes be needed too

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**A: Focal length of your lens** (related to full-frame digital cameras):

>> For cameras with cropped frame sensors the same lens will result in an image magnification of at least 1,5 times larger than when using a full-frame camera

- a typical 'normal' lens has a 50 mm focal length (the image perspective is similar to how we view everything around us)
- wide-angle lens: typically 35 mm or wider
- standard telephoto lens: typically 70 mm to 200mm
- long telephoto lens: longer than 200mm focal length

**Recommended:**

- for WP: long telephoto lens with at least 300 mm focal length

>> wildlife is keeping its distance

>> a very long telephoto lens of 600mm or longer may sometimes be needed too

>> **at waterholes with a large herd of elephants a standard telephoto and even a wide angle lens should also be kept ready**

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Recommended:

- for LP: wide-angle e.g. 16mm to 35mm
- >> 24mm or wider lens often better for most grand landscapes

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  - >> medium & long telephoto lenses: for tighter landscape shots & abstracts

# MODULE 3: PHOTOGRAPHIC EQUIPMENT

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**B: Light-sensitive lenses (fast lenses):**

>> Fast lenses have very wide maximum aperture setting

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>> e.g. f/1.4 for wide angle or standard lens

>> f/2.8 for long telephoto lens (300 mm)

>> f/4.0 to f/5.6 for very long telephoto lens (600 mm)

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C: Telephoto lens with fixed focal length vs. telephoto zoom lens:

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- **fast telephoto lenses with fixed focal length of 400mm and longer still may have a wider maximum aperture than the best zoom lenses with similar focal length**

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- **for WP: with zoom lenses you don't need to change lenses thus avoiding danger of missing out on a shot or getting dust inside camera; no need for two camera bodies & fewer lenses needed: save money**

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**Recommended:**

>> **buy the best lens and good camera rather than the best camera and a poor lens**

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>> for even quicker access (for example during WP) leave your camera with lens on the car seat next to you just covered by a soft cloth or scarf

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### E: Camera Cleaning Stuff:

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- **brush/clean when necessary in closed area (room/tent/car)**

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### F: Camera Bean Bag Support:

>> Small cotton bag (small pillow case) filled with small kernels (rice, lentils, beans); you rest your camera and lens on it for support and it adapts to the camera shape & the underground shape

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>> Support for steady camera during shooting (i.e. in low light & at slow shutter speeds)

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- >> not all tripods are made equal, and for international travel a professionally made light carbon-fibre tripod and tripod head with quick release plate are recommended

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- >> it is very important to bring a good quality binoculars as poor quality devices will strain and weaken your eyes
- >> 10x50 binoculars are very well suited for spotting and identifying wildlife and birds, 10x indicates the magnification and 50 indicates the front element diameter in mm (the wider the better as more light enters and the viewed image is brighter)

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- >> By avoiding the following mistakes you can make your life easier and focus on getting the best shots

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- No power adapter for charger:
  - >> buy in Windhoek or Swakopmund

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  - >> impossible to buy on route in Namibia; only possibility in Windhoek, but DO NOT RELY on this

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### GENERALLY:

- >> on route through Namibia it is very unlikely you'll be able to buy any broken or forgotten camera accessories

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- Make sure to avoid the crucial mistakes listed