May 16, 2011

From: ....

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Feedback and two proposals on incorporating visitor data
Contents: Introductory letter, one table, one diagram, total - nine
pages.

Theme: novel data=novel funding,

Dear ....

If you are reading this first may I say a big thanks for agreeing to read
this privately in the first instance.
In general, my feedback to you partly stems from my idea to
commercialize, via social enterprising via the European Space Agency –
ESA, some research I Initiated and carried out investigating the
behaviour of southern white rhinoceroses in a safari park, in particular
their reaction to visitor vehicles.

Now to your visitor/tourist data project, thank you for the reply to my
initial request, I have been reading the document 'PA tourism concept
final' and had a quick look at the references therein. I think we agree
there is untapped potential in visitor data. However, as mentioned
previously I do have comments about WDPA's proposal, Eagles' own proposal
as well as my proposals, so please bear with me as I set out my stall…..

Of your own 'PA tourism concept Final' my thoughts are this;
The overall impression is a wiki-project that is naturally very
attractive to the WDPA chiefly due to financial reasons. However, the
use of the phrase at the very end … 'if necessary '….when talking about
developing your full project leaves a non-committal flavour to the whole
long term project and if UNEP and the IUCN aren't committed would funding
donors be?
The non-committal impression is furthered by what sort of tourist data is
sought, with only number and time of visit being suggested i.e. gate
entry data, but to my mind gate entry data alone doesn't tell you how
visitors impact on the protected area. Indeed the issue of how do you
assay for visitor/tourist damage isn't raised far less addressed. But
only by being aware of and reporting on tourism/visitor effects inside
PAs and managing visitor effects inside the parks accordingly is the way
to sustainable tourism paved and thus a sustainable tourism based
economy.

Commitment and data fields issues aside wiki reporting is a very good
idea for its technical simplicity just 'get the staff to put in their
data'. A fateful oversight may be that of human behaviour primarily non-
compliance. Perhaps if one look at the wiki entry entitled…' LIST OF THE
LARGEST PROTECTED AREAS IN THE WORLD' even that itself is not complete
with I quote 'very few or no links to it'. So one is left to ponder is
that the shape of the visitor data to come?
It seems tangential but to see the extent of compliance issues one need
just to turn to the pharmaceutical business to realize how detrimental
this can be. Where patients may need to take life saving medicines at
certain times but just don't, the point is here even if one's life

depends on being compliant, it doesn't mean compliance will occur and it's a global problem. Thus, compliance if not addressed may completely hamstring the WDPA visitor project from the outset.
If that human problem were overcome then any data that is deposited by staff would require validation. This is already a huge problem for Wikipedia in general i.e. is information right is it wrong is it both. Granted that the standard Wikipedia is filled in by the public but the question remains of why will this 'WDPA wiki proposal' not fall into the same trap?

This leads to the reference on which the WDPA wiki idea is based, Balmford et al, 2009, which also raises the point about over-reporting or under-reporting skewing the modeling.
A point that may be overlooked that the data the Balmford reference used was comprehensive but clearly took a long time to process and produced one clear conclusion i.e. nature based tourism is increasing. Are not businesses more likely just to look at bookings for flights, cruises, hotels, franchises you get the idea, hard ticket sales with associated information to get a faster[real-time] more specific monetary-based data applicable to their local situation?

The 'PA final document' mentions the over-riding need for approaching donors but which donor wants to fund a wiki project that might just produce a few incomplete web pages, again look at incomplete protected areas wiki page. This funding aspect is important, as UNEP has been criticized internally and externally e.g. criticized by its internal staff for lack of audibility and in the media. For example Moneyweek, April 2011 reports that 'the British government recently made its support of united nations agencies conditional on delivering value for money '...
The document begins by describing the size of the tourist market but can the WDPA visitor proposal overcome business world-weariness if it is quickly perceived as 'yet another wiki project' atop an already saturated internet market?
When 'marketing' collated data then why should these businesses choose the WDPA data over more established and comprehensive market research data e.g. flight bookings, hotel bookings, safari bookings, boat trips etc.?

Finally, going back to the start of the document and thinking of the future, beyond the baseline data, the question has to be asked: …can members of staff accurately or even fairly represent and report on what millions of tourist are doing daily and experience daily in amongst their many, many thousands of km2 of protected areas?

Of 'Paul F. J. Eagles, et al of the tourism task force 2010 titled: Integrating visitation data with the world database on protected areas: background and justification, my thoughts are this………..

The funding request for - $2 million dollars -upfront-appears ill judged at best and shows wishful thinking at best given the WDPA budget.

This is a fundamental mistake by Eagles' group because all the WDPA relevant text, such as the WCMC strategic plan 2006-2011, points to funding as a limiting factor for enhancing the WDPA.

If instigated though I contend Eagles' plan would be hamstrung from the outset by the fact as visitors to protected areas grow [Balmford et al, 2009] his budget demand will spiral i.e. more visitors - more people to

collect data- more data to enter- more data to analyze – more visitors- more staff to collect data ....and so on...ad absurdum

Eagle's plans are very labour intensive – can the park staff feasibly input representative data on for example, America's 2.6 billion visitor days! Would they have time?

Eagle's proposal has no obvious measurable milestones plus the data then deposited – by the method described – or moreover alluded to by Eagle's will be slow to collect and so immediately out of date – would businesses want that data?

For both proposals my overriding theme is with the data that to be collected could and should aim to be better from the outset especially to attract novel funding. Furthermore, I consider that both the WDPA proposal and Eagle's proposal will not help protect protected areas because the degree of visitor impact/damage just can't be established from these projects. I believe, it is more dependent on : 1) the visitors mode of travelling throughout and inside the PA and 2) what visitors do when they stop/sightsee. I argue how animals react/move to the visitor approaches perhaps being the best visual marker to measure how visitors impact at each stop. This is because an animal's reactions will generally depend on the number and proximity of such visitors. By collecting data on both visitor and animals relative movements one can create an animal/visitor proximity database or visitor effect database. This will truly pave the way for monitoring tourism and allow for managed and thus sustainable tourism and hence sustainable financing of protected areas.

To this end, I would suggest a combination of approaches for the visitor/tourism database:

Wiki – reporting by protected area staff as is currently underway 'protected planet, I propose with confidence markers alongside inputted data.

Social media reporting/bookmarking by tourists themselves - tourists will help if they know where to help. So putting those '2.6 billion [plus]visitor days' – [Quoted by Eagles'] to some use. The reporting physically inputted via handheld devices – mobile phones/iPhones/blackberry. The devices could be given as in webloaded/flash loaded a 'Tourist User Interface' i.e. electronic form by staff at point of entry for the tourists to fill in the field. This approach may represent a technology coup for UNEP and the IUCN by turning the 'reported scourge' [not my thoughts] of social media into an invaluable global service by the public for the public. By 'scourge', I mean consistent reports like the Sunday times [24/04/11] stating Apple are recording without permission the personal details and crucially the location of its iPhone customers 100 times/day! However, by having these customers note 'wildlife' or 'environmental' markers at preset and their already recorded locations, this could turn the 'snooping problem' into a Protected Area solution.

For example, I would envisage markers recorded such as IUCN flagship animal species/status/movements-consider..Southern white rhino/pregnant/grazing. In essence recording what tourists may be saying to themselves anyway but with a time and Protected Area location. The use of such 'social sensors' has been reviewed for the use of real-time

earthquake/disaster detection, however I would imagine with skyscrapers/bridges falling over, tweet reporting may be a little superfluous. I propose social sensors would be much better targeted to visitors in PAs. The example of a currently available microblogging service ' Squeelr' which includes a geolocation app, may indicate the best way to technically construct a tourist user interface for wildlife social sensing. Thus, one could obtain for example a Protected Areas Tweetmap from their input to the visitor effect database. As the take up may be prominent by younger –[than me]- users who make heavy use of social media and also harbor fresh enthusiasm for caring for wildlife and their environment, growth of this project may be very strong due to empowerment and control it gives them back over their world. There is also a potential safety of live aspect here, if sightings such as [rogue] bear location and visitor proximity in protected areas were recorded. One may also then see how tourists own reports compare to staff reports, allowing data crosschecking.

My pending European Space Agency business proposal Wild MO.M.S [WILDLIFE movement monitoring system] is set out in more detail in elsewhere and will be sent seperately if you wish to take my proposals forward . Essentially, it proposes investigating the use of Galileo [the forthcoming European GPS satellite constellation] to establish a visitor effect database with respect to visitor vehicles. Why? Because many observations in ethology are simply recording animal movements i.e. a change in position [or micro-positioning]. My own work in safari parks shows the way visitors drive vehicles changes animal behaviour –sometimes adversely. Globally the same problem is causing many disputes between tour operators and game park management e.g. in India where the government have threatened to close tiger parks due to the problem. By using Galileo and visitor vehicle based sensors one can look to detect these changes in animal behaviour [nee movement] with respect to the visitor behaviour[nee movement] And thus monitor visitor impact in protected areas. Importantly WILD MO.MS doesn't propose animal tracking [macro-positioning]. Initially planned to focus on IUCN flagship animals as in tiger or rhino etc.. Then use the same principles of working out animal/vehicle proximity and establishing a parallel database thus to help monitor road crossings of wildlife such as deer. The sale of data from the latter to help fund the former. The initial plan was submitted to European Satellite Navigation Competition 2010. It is now being improved and updated to be used as a basis for a business plan to seek funding from the European space Agency to begin. However, following review of WDPA document 'PA tourism concept final' as well as 'Eagles at al 2010' plan for visitor data, I see my WILD MO.M.S plan, via the above intermediate step 2, could greatly enhance my plans, the WDPA visitor plans and both my proposals move the protected areas self-financing requirement of UNEP that step closer. And by using WDPA of course there is no need to duplicate database work on areas such as data standardization. In other words, my additional two proposals would be a technical and administrative improvement to the WDPA visitor project or 'PA tourism concept' and they may also tie in with the WDPA Proteous initiative. Indeed the visitor data after filtering through the WDPA may then feed into GloBIO – as a representative sample of 'human interactions' respect to animal species and thus contribute to their 'species modeling'.

Although I envisage all three proposals are to be launched at the same time, my numbering reflects time of how soon data from each would be in the WDPA database. I would envisage that data is collected to local/in-

situ data centers, filtered [thus novel employment opportunities in developing countries], before being passed to WDPA [Cambridge]. Table 1 sets outs an overview of the plus and minuses of each the three approaches. Further potential benefits identified for the WDPA for supporting and collaborating with my own proposals are as follows….

The WDPA isn't publicly well known and 'Natura' far far less [SEBI 2010]. The overriding benefit of my approach is a kick-off with FORMAL space agency involvement immediately raising profile of WDPA to a global level and the visitor/tourism project accordingly. It just sounds better.
The kick-off could be done by entering the visitor and visitor effect database idea into ESA's current satellite navigation competition – for extra funds.
Joint launch gives good publicity to both parties i.e. ESA benefits hugely from green publicity [that isn't about climate change for a change] opening up novel funding routes to WDPA.

My combined approach could represent a beginning for the biodiversity barometer that scientists reckon to cost $60 million [Science magazine 2010: "The Barometer of Life."]
WDPA is unique being a joint venture between UNEP and IUCN, my WILD MOMS plan strengthens these ties by 'using' IUCN protected species to 'monitor' UNEP protected areas or one could say native animal behaviour as an assay on the impact of visitors and the state of protected areas. Thus, my approaches provide built in ecosystem management (a UN-EP priority).
Using social sensing; Tweetmap and WILD MOMS moves the UNEP and IUCN closer toward their goal of self-financing of protected areas. To quote eagles et al 2010, ..' the WCMC has recognized the value of such [visitor] data collection, but needed addition resources to carry out the project.' …ironically this makes Eagles own proposition –requiring a conservative $2 million rather self-defeating.
My WILD MO.M.S proposal was envisaged as a business concept so would require built-in project management to move any further forward. In other words my proposals will aim from the outset to provide best estimates for objectives, milestones, timetables, funding, project management/control, reviews, next cycle..set new objectives… etc Thus meeting UNEP requirements and addressing recent criticisms of auditing at UNEP.
The current 'market' for WDPA data seems too heavily reliant on the goodwill of excavation/mining companies - but what happens to that market when oil/copper/aluminum runs out – my process improvements help severe this dependence.
The twinned database approach of WILD MO.M.S aims from the very beginning to gather and provide knowledge that the market is currently demanding, because it is not enough for WDPA and its partners to wish for biodiversity knowledge to be at the 'centre of [business] decision making' [Strategic Plan 2011]. There has to be a good [business] demand for the data.
My improvements give this, e.g. insurance companies could use it for risk management due to the safety of live potential of Twittermap, avoiding rogue animals and/or the WILD MO.M.S scheme, eventually providing data that help vehicles avoid collision with deer/elk/kangaroos on roads. Actual geolocations for endangered species need not be given – i.e. relative positioning

Financially 'the twinned database approach' of WILD MO.M.S is another financial process improvement to the WDPA as it aims from the very beginning to establish a cross-subsidy model, like banks may provide

'free' banking by charging elsewhere. The twinned database approach may overcome the paradoxical position to support, promote and expand itself from data that WDPA has to provide and share – freely - under the creative commons licence under which the WDPA operate.

Long term the European Space Agency may become an integral partner for conservation [not just satellite piccies] and together with WDPA support a healthy – 'conservation centric '– kick-start to the economy part of the space agency mandate.
Long term ESA's Galileo Navigation System is a new and growing civilian global satellite system seeking a civilian global purpose – my proposals run in conjunction with the WDPA can provide that purpose!
Long term any patentable or other IPR material if developed through the course of instigating and developing my proposals could be divided between the three envisaged collaborators/shareholders (GH, the WDPA and ESA) and thus generate further novel source of income for the WDPA from highly novel sources. For example, to help entice the insurance industry for funding. As IP will be held by public bodies this will avoid malpractice such as patent hoarding by commercial firms and allow building on of any tech improvements downstream without legal [IPR] hurdles.

I realize that WDPA is part of the WCMC so you will have other higher priorities, so may I finish by saying none of the this is set in stone so please do follow up if you require to know more to move this further up the WDPA agenda. Anyway, first off I will approach ESA and simply ask will they be willing to help on these plans. I believe they will as data collection and a database are already in place this is using ESA to enhance that data and data process. So let me know what way you wish to proceed.

Look forward to hearing from you.

All the best

P.A. VISITOR REPORTING STRATEGY SUGGESTED
NAME PLUS MINUS TIME OF ROLLOUT   staff wiki
input/

e.g. 'protected planet' T.O.M.S –PART 1
i.e. tourist monitoring system

[Visitor Database acronym probably not so good] Ease of set up

Low cost

Ask for ESA seed funding plus ask for ESA based office due to receiving publicity and forthcoming involvement

 Compliance
Too little reporters for vast areas and overwhelming tourist numbers
Coercive
Subjective
Under/over reporting
Validation
Scarcity of data -makes it unfit for business 2012-2014

Social media
devices
'Tweetmap' for tourist 'telegrams' on PA animal behaviour

Wild .M.O.M.S
I
Via Social media monitoring system
or
P.A.T.
Protected Areas Tweetmap
         Ease of set up   Low cost
Builds on engrained tourist behaviour – taking holiday snaps –'hounding wildlife' e.g. tigers
Simply have tourist report how far from animal are you and time at this proximity and animals behaviour
Potential WDPA funding from novel groups – e.g. approach Twitter, Virgin, Walt Disney
Begin technical ESA involvement e.g. cloud computing assistance
Ramping up WDPA data storage/processing potential
Subjective

Too much data – need cloud computing to filter?

Validation
 2012-2015 Automatic reporting of relative position of wildlife to tourists/tourists vehicles
as well as wildlife relative to road traffic

Wild .M.O.M.S
II

[Wildlife movement monitoring systems via vehicles]
e.g. catchphrase
WILD MO.M.S
'caring for one world' ESA funding and partners therein

Cross-subsidy approach of project allows far greater flexibility in attracting novel funding e.g. insurance funds, vehicle/component makers.
Novel space agency collaboration
Inspirational to other environmental projects

Could help define the civilian role of Europe's navigation system – its 'USP'

time to 'get off ground'

technology hurdles

may require safari park feasibility trials

longer time to get data collection established 2012-2020

Figure 1. PA Visitor Data Capture overview. Multiple Inputs for 1) a fuller PA impact picture 2) novel sustainable long-term funding 3) far higher public awareness

WDPA-CAMBRIDGE
Filtered Visitor data collation/analysis/
Distribution

STAFF DATA INPUT
No obvious funding if only this form!
But Funding from ESA/social sensors sponsors allows new staff to filter social sensor data at local level.... new PA jobs...

VISITOR INPUT: AS PA SOCIAL SENSORS
Novel funding form app developers e.g. Apple

ESA/ Galileo INPUT: Wild MO.M.S assistance for social and vehicle sensor networks
Novel funding due to use of ESA tech – if based there – [essentially free office infrastructure]
Superb tech advice/proof of concept funding on global PA monitoring real-time etc

Tourist gate entry data
Use: PA income/expenditure
Target: tour operators/game park management

Wildlife Movements data
 Use: Monitoring Visitor effect [behaviour] – wildlife status –protected area status
Target: IUCN/UNEP –
Data Plus part of a biodiversity barometer – measure financial sustainability of PA
PA impact

Visitor/Wildlife proximity data
Use: Rogue animal/Road collision avoidance –eventually
Target: Insurance companies vehicle makers
Data Plus: steady funding