Using Movebank Meta-data in Kamadata:

Kamadata is a great tool to view all tags in your **ATLAS** system and check its current performance (great for admins). However, things get a bit unwieldy if many tags from many different projects are deployed at the same time or when looking through the database of past experiments. This is because Atlas itself does not store any meta-data for the individual tags, which would only mean to manage and run yet another database. Here is where **Movebank** integration comes into play and can help you organize your projects.

When you try to access any of the Movebank related functions for the first time, such as ***'Open Movebank Study', 'Query ATLAS Database for Study' or 'View ATLAS Realtime Data for Study'*** you will automatically be ask you for your Movebank user-name and password. *[in case you accidentally entered a wrong user-name or password]* ***Go to » File » Settings*** *and you should find Movebank, with your currently set user-name and password double clicking on either will allow you to edit these.*

All you really need, is to set up the project in Movebank and upload your meta-data using a .csv template of your meta-data and then you can load your study in Kamadata to view it in real-time or easily download the data without having to put in long command-line queries in atlas or having to access your database directly.

Meta-data for Movebank:

Meta-data you will need to define in the .csv file:	
tag-id:	the full tag id **(Note: the full tag id is either a 10 digit number for the first generation of tags e.g. 100400XXXX or a 12 digit number starting wit your area code e.g. 97200100XXXX for Israel)**
animal-id:	your animal id (e.g. ring number)
animal-taxon:	scientific name
deploy-on-date:	The date and time when the tag was deployed **(Note: Movebank is very specific about date formatting. Your date should be in the following format: Year-Month-Day HH:MM:SS)**
deploy-off-date	The date and time when the tag was taken off **(Note: deploy-off-date is only required if you used the same tag on multiple animals)**
tag-manufacturer-name:	ATLAS

Setting up the Study in Movebank:
to setup the study **go to » movebank.org** and log in using you user-name and password
click on » Tracking Data Map

click on » Studies
click on » New Study
Enter » Study Name *(we use specific naming conventions for ATLAS studies your study should be named 'ATLAS [atlas-system-name] [animal taxon] [year]')*
Enter » Latitude and Longitude of your study site.
click on » Upload Data » Import Data
click on » Reference data about animals, tracking tags, or deployments
click on » Use Movebank standard reference data format
select » your .csv file containing your meta-data
click on » upload
once uploaded you will have to make sure that the columns are mapped correctly

If all went well you can open Kamadata now and use the following functions:

- **'View ATLAS Realtime Data for Study'** to view only the tags in your study in real-time
- **'Query ATLAS Database for Study'** to download all data associated with your study
- **'Open Movebank Study'** if you only want to view them in Kamadata

Query ATLAS Database for Study:
When clicking on **'Query ATLAS Database for Study'** a file selection window will pop up. Here you are asked to enter a file name **(note: the file does not need to exist already)** where your data will be stored (there is the option to store in a text file format (not recommended) or using **SQLite**, which will provide you with a offline database allowing you to access your data using the same query commands as an online database, just allowing you to access your data much faster. **SQLite** is supported in **R through the library("RSQLite")** and **natively in Matlab through the sqlite() function**. If you are looking for a tool that just lets you look at the raw data in your **SQLite** database I recommend using http://sqlitebrowser.org/
You can find example code for **querying from an SQLite file on the ATLAS-HUJI GitHub repository** https://github.com/ATLAS-HUJI