> See the help on map_proj_forward and map_proj_inverse. They may be
> useful to convert between latitude/longitude and pixel values,

I process already projected data (Lambert conformal projection). I am
also trying to write a shape file at the same time, so I can check
each pixel to be sure.

I have tried the suggested solutions and I think the optimal for me is
ROI way. It took 27s to get the results on a layer with 200 by 200
pixels; geostatioary image has in this case 74 * 45 pixels.

I have tried also JD's match_2d to get the closest point and then I
wanted to proceed by approach suggested by hethomas, however, it took
me 45s just to compute the closest satellite centre point (without
checking if GIS point really fits into the polygon)...

But I would have gone for such a similar approach if I hadn't asked
you for an advice before. So thank you all.