



**SDI Review Form 1.6**

Journal Name:	<a href="#">Physical Science International Journal</a>
Manuscript Number:	Ms_PSIJ_35306
Title of the Manuscript:	MECHANISM OF FLOW IN PATCHY GRAVEL AND VEGETATED BEDS
Type of the Article	Original Research Article

**General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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**PART 1:** Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	<p>The methodology and the results/discussion are correct although the presentation as it is should increase in quality. The interpretation of data is good. I consider that the conclusion section is too extensive. Authors should make an effort to summarize the main results.</p> <p>Abstract: Remove 'using a 3D Doppler Velocimeter'  Abstract: Remove 'patchy'  Introduction: Change 'investigated'. It should be investigation.  Figure 1 should not be presented as it is, since the figure is taken from Nepf (2012). The authors should propose a different plot, made by them, outlining the main hydrodynamics described by Nepf (2012).  Aims and Scope: The reference by Jesson et al 2010 is not in the reference list.  Aims and Scope: Remove 'Related to this'  Aims and Scope: Should be 'shear velocity'  Exp. Methods: should be 22 m (I guess)  Exp. Methods: I consider that the patchy structure is not clearly addressed in the paper. Is the flow stable over each of the patchy structures?. Why the authors simply designed a channel with a double of structure of half a channel with the flexible vegetation, all along the flume, and the same for the rigid one?  Exp. Methods: Define at what y distances the CRSi are taken.  Results: In all the figures, please, use a, b, or a, b, c and d. It will clarify the presentation of the figures,  Results: Use flexible bed and rigid bed, all over the manuscript. Do not use surface.  Results: I need more evidences proving that the hole of length scale of 17 cm is not adding some disturbances when measuring the hydrodynamics.  Results: Page 6, in all paragraphs remove the sentences that advance the comments of results in the discussion, as for example: and the resulting vertical shear as further examined in the subsequent results, or 'The effect of the near bed accelerated flow on the vertical shear ....'  Results: page, 7. Should be Nezu and Nagawaka (1993).  Discussion: Remove all reference to Figures, except for Figure 9 and Figure 10.  Discussion: Remove in Page 9, Referring to Figure  Discussion: I recommend to change all references to EXPT1 and EXPT2 to 'rigid bottom bed' and</p>	OK



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	<p><b>'flexible bottom bed'</b></p> <p><b>Conclusions:</b> Jesson et al 2010 is not in the reference list.</p> <p><b>Conclusions:</b> Remove any reference to Figures and Experiments, as in the discussion section, please.</p> <p><b>Conclusions:</b> Remove the last two conclusions.</p> <p><b>Figure 3:</b> Draw a vertical line at <math>y/B=0</math>.</p> <p><b>Figure 6:</b> Explain better the figure, adding an scale for the velocity.</p> <p><b>Figure 5:</b> Rewrite the text. It is confusing.</p> <p><b>Last figure</b> should be Figure 10.</p> <p><b>References:</b> The texts should be without capitals. Some of them are abbreviated and some of them aren't.</p> <p><b>General:</b> Could the authors analyse what the length scale of the transition between the lateral beds is. I guess the transition of <math>U_m</math> on Figure 3 (left) is different at each side of <math>y/B=0.5</math>, specially at <math>z/H=0.07</math>.</p>	
<b>Minor</b> REVISION comments		
<b>Optional/General</b> comments		